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The New Population Debate:

Two Views on Population Growth and Economic Development

By Timothy King
and Allen C. Kelley

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The New Population Debate

Introduction

Once again famine threatens the lives of millions across Africa. Thousands have died, and prospects for others, particularly the children, are bleak. While food production has kept pace with population increases on a global level, in Africa agricultural production has lagged because of mismanagement, drought, civil wars, and soil erosion. Debt-ridden African nations now lack the credit to purchase food on international markets.

Africa's food shortage comes at a time when some policymakers are questioning many of the basic premises of U.S. population assistance. This was reflected in discussion about the U.S. position at the 1984 International Conference on Population in Mexico City. Few would deny that population and resources are currently out of balance in Africa. Yet there is growing sentiment that past reactions to similar crises have exaggerated the role of population growth. Today much more attention is being given to political, economic, and resource management factors.

How does rapid population growth contribute to imbalances between people and the resources available to provide them with an adequate standard of living? Are the adverse effects of population growth on economic development serious enough to warrant supplementing efforts to increase food production and distribution capacity with population assistance? These questions are the focus of the renewed population debate. The following articles represent two views on the issue of rapid population growth and economic development. The authors, Timothy King of the World Bank and Allen Kelley of Duke University, present different perspectives—but agree on many of the fundamentals. Together their papers provide fresh insight into this important policy question.

Both reject alarmism about impending "population explosions" and the use of population as a scapegoat for all Third World ills. King emphasizes the need to examine and address population problems country by country, as "global trends mask a variety of conditions." He counters proclamations that all growth is good by showing the shortages of arable land that result if rapid population growth is sustained in poor countries dependent on agriculture for their economic well being.

Kelley characterizes rapid population growth as a catalyst that brings other problems to a head faster and limits the time in which political solutions must be found. He suggests that the impact of rapid population growth is tempered when its positive indirect effects are considered.

If Kelley and King were asked to assess the causes of today's African food crisis, their answers would be similar. The growing human and lifestock populations hastened the spread of deserts in Africa that helped lower production, says King, but the main culprits are limited technology and weak incentives to producers. Kelley would agree with King's assessment; he notes that pricing policies in many African countries twist the terms of trade against farmers. Famine, says Kelley, results from inadequate distribution of food and income. Population growth is not the villain in food shortages, according to Kelley, but an accomplice.

Taken together, the articles cast population in the role it is now understood to play; not as the sole cause of underdevelopment, but an accomplice aggravating other existing problems.

Population and Development: Back to First Principles

by Timothy King

Refugee relief, Somalia

On a global scale, population growth rates are lower in the mid-1980s than they were in the mid-1960s. And the debate about adverse effects of population growth on economic development has been reopened: some argue that past concern was exaggerated, while others stress that population and development issues remain as serious as ever. In my view, the demographic future for many countries, and its implications for improvements in living standards, is still far from clear.

The basis for this thinking is that global trends mask a variety of conditions and problems. One of the main themes of this paper is that the population "problem" of developing countries really represents a *number* of problems. To fully understand the potential significance of population growth, it needs to be examined country by country, even region by region within countries.

A "standing room only" population explosion was never likely to occur. Take the case of Mexico: if its 3.4 rate of population increase of the early 1970s had continued for half a century, Mexico's population would have multiplied 14 times. No serious demographer or economist believed that such a scenario was even remotely possible. It is inconceivable that within 50 years Mexico could have managed to provide a tolerable standard of living for such a large number of people, or that the United States would have been prepared to accept tens of millions of Mexican immigrants.

Fortunately, Mexico's fertility rate has fallen rapidly since the mid-1970s, the result of a strong family planning campaign coupled with increases in life expectancy and other social and economic changes. Even so, Mexico's population is expected to double before it eventually stabilizes. While doubling is not 14-fold multiplication, for Mexico it is still a major challenge.

Fertility rates are not expected to fall as fast in Africa. Death rates are still high. There is little sign of conscious birth limitation or a desire for smaller families. In some parts of the continent, poor health prevents many women from having the number of children they desire, so a rise in fertility seems a likely consequence of future development.[1]

For Africa there is another possibility that cannot be rejected out of hand. In most African countries south of the Sahara, agricultural production did not keep pace with population growth during the 1970s; in a few, it actually fell. Blaming this poor performance on growing population pressure would be wrong; limited technology and weak incentives to producers are probably the major culprits. But the spread of deserts, the result of added pressure from the growing human and livestock populations, may have helped to lower production in some African countries.[2]

Agriculture is Africa's main source of both export crops and local food supplies; the possibilities of relying on food imports to compensate for poor agricultural performance are limited. Therefore the Malthusian specter of population growth slowed by rising death rates rather than falling birth rates has not yet been exorcised.

Even for developed countries, the future is not at all certain. The drop in fertility to below replacement levels in most industrialized countries in the 1930s, and its return to these levels four decades later after rising substantially in between, has not given much indication of what determines long-run population trends once countries reach a high level of development. Therefore, it is unclear whether the population

Marketplace, Mexico

of developed countries will grow or decline in the future.

My paper's purpose is not to speculate about the combined effect of these contrasting trends or about the mechanisms that must come into play if humans are not eventually to be standing on each other's shoulders or to die out altogether. I want merely to make the point that the economic and political significance of demographic change is not simply or even mainly a question of global numbers, but will be largely determined by *where* future population growth occurs.

These remarks and examples, I hope, strike the reader as commonplace. For many years development specialists and policymakers around the world have recognized the significance and seriousness of demographic change. During the early 1970s, those concerned with population growth disagreed over whether family planning services are enough to reduce fertility or whether these efforts are useless until economic development has been achieved. Since then, however, a consensus has emerged in response to evidence indicating that both family planning and socio-economic conditions are important in determining birthrates.[3] The complementary roles of economic development and family planning have been widely affirmed.

The Challenge to the Consensus

It is therefore surprising that within the United States the family planning vs. economic development debate has returned to the arena of public controversy. Direct challenges to the consensus have won the attention of the Reagan Administration.

In 1981 the U.S. Office of Management and Budget unsuccessfully attempted to reduce and then eliminate the U.S. Agency for International Development's family planning budget. Before the U.N.'s August 1984 International Conference on Population held in Mexico City, controversy erupted within the Administration over formulating a U.S. policy position. Reversing policy held by previous administrations, U.S. delegates questioned the need for family planning assistance and argued that the effort to slow population growth should focus on economic reforms to create free-market economies in the Third World.

The challenge to the earlier consensus is based on the view that the effects of rapid population growth have been exaggerated and government policy should not target individual decisions about fertility except to provide education and possibly contraceptive supplies. These views were most prominently expressed in a 1981 book by Julian Simon, *The Ultimate Resource*.[4]

Simon's theme is that the global situation with respect to the supply of raw materials, energy and food is not as bad as many people think. Potential reserves are very large, but not fully known because they are found only as needed. The potential for recycling is also enormous. Taken together these imply infinite resources.

Food supplies are not significantly constrained by land shortages and the situation is not getting worse, says Simon. The prices of energy and raw materials have fallen in the long run. Short-run trends may be misleading. And because population growth leads to faster economic progress in the long run, it also eventually may lead to more and cheaper food per person and relatively cheaper energy supplies. "The ultimate resource," he says, "is people—skilled, spirited and hopeful people—who will exert their wills and imaginations for their own benefit and so, inevitably, for the benefit of all of us."

The Arguments Under Attack

Before discussing this view further, it will be useful to summarize briefly the conventional views about the impact of rapid population growth that are under attack. This is necessary because critics are usually selective in the elements of the case they choose to attack.

The first are the traditional Malthusian concerns. Sooner or later, a combination of population growth and growth in income per person puts pressure on a fixed supply of natural resources whose prices rise. Except for the owners of these resources or close substitutes, most people will be worse off. If the resource is vital and if substitution possibilities are limited or unfeasible, then there will be serious economic problems, especially for the poorest people.

An obvious candidate for depletion is arable land. Although rich and poor people consume different foods, the demand for food is largely a consequence of population size. Since food is essential to human existence, the supply of resources needed to produce food (land, water and energy) may ultimately constrain the size of the human population.

Malthusian concerns are often extended beyond a concern for food supply, to an anxiety about energy and mineral supplies, rising environmental pollution, and so on. At their most extreme, Malthusians raise the problem of "increasing entropy"—the fact that use of energy involves its conversion into forms that make it unavailable for future use.[5] (This is the second law of thermodynamics.) This may be a serious problem in a closed system such as the universe, but not in the earth's biosphere, daily supplied by energy from the sun.[6] The general problem with any extension of Malthusian arguments beyond food supplies is that most of the concerns reflect the consequences of rising income and production per person, at least as much as an increase in the number of people.

Very often the best solution is *not* to live more simply and to do without the products of a polluting industry, but to insist that such industries install equipment to reduce their pollution. This raises both costs and prices and is most easily afforded by rich countries. Similarly, the recycling of minerals will be more easily achieved by a wealthy world than a poor one. For the purpose of discussing population growth, therefore, Malthusian issues are best applied to the traditional question of food supplies.

There are many developing countries, including most of Latin America, that are much richer in agricultural resources than Japan or Western Europe. Malthusian concerns seem much less relevant here. A second Malthusian concern is that population growth retards the growth of income per person. This argument has two strands. The first notes that a more rapidly growing population has a greater percentage of children, and therefore workers must support a larger number of dependents. This might lead to lower savings, and hence lower investment and slower growth in total income. In the litany of antinatalist arguments, however, this one bears little weight. The determinants of savings and investment are complex and not well understood, but most modern theories suggest that the proportion of children in the population is not very important.

The argument's second strand is much more significant. It argues that whatever investment does take place—whether in schools, farms or factories—must be spread over more workers and so slows the growth of capital per person. Lower per person capital may manifest itself in the use of labor-intensive production requiring many workers and producing less per employed worker. Alternatively, it may be reflected in high levels of unemployment and underemployment in some areas of the economy and the use of capital-intensive technology in other areas. Since a more rapidly growing population creates a faster growing labor force, the gross national product (GNP) might grow faster than with slower population growth; but GNP per worker and per person will grow more slowly.

A third concern is with the adverse effects of population growth on the distribution of income and poverty levels. Independent of growth in average incomes, population growth means an increase in the labor force relative to the supply of land and capital; this means relatively lower wages and higher rents and profits. Since property owners have more opportunities than wage earners, as a class they will be wealthier (even if they also earn wages). Therefore population growth means a less equal distribution of income. In the world's poorest countries, poverty is thus more slowly eliminated.

Other worries focus not on the economy as a whole but on individual households. Larger families can offer less parental attention per child, in addition to limited economic resources and housing.[7]

Stated in this brief and general way, as they have been in the past, these arguments represent only

Urban slum, El Salvador

general trends. Population problems vary from country to country, and they are not always conspicuous. To say that labor force growth aggravates problems in creating jobs or raising productivity does not mean that this growth inevitably causes unemployment or that it prevents all growth in productivity. Nor, of course, does it mean that all unemployment can be blamed on population growth. Similarly, to say that population growth contributes to problems of poverty and undernutrition does not mean that it is the sole cause of world hunger.

The New Debate

The Ultimate Resource is a polemic; instead of seeking out the strongest opposing case, Simon attacks the easy targets, such as *Limits to Growth*, the arguments of the more extreme Malthusians, such as Paul Erhlich, and of the biologists who have drawn analogies between the reproductive behavior of insects and rodents in confined spaces and humankind on an overcrowded planet.[8] There have been weak arguments and much exaggeration, so there are many tempting targets. But to anyone grappling with the real problem of rapid population growth in developing countries, much of Simon's book, far from sparking productive debate, appears to be setting fire to a row of straw men.

Leaving aside polemics, however, the strands of Simon's argument with respect to population are as follows:

1. The best guide to the future is the past. Prices of food, energy and raw materials, which are the best measures of scarcity, have tended to fall historically. Past predictions of population growth have often been inaccurate. Therefore, there is not much to worry about.

2. Furthermore, there has been little historical correlation between population growth and growth of per capita income. Although providing jobs and government services for a growing population requires resources, children in developing countries do useful work at an early age. Parents with large families are likely to work harder and save more. Per taxpayer, it is cheaper for a country with a larger population than a smaller one to install a seaport or build a railway system, so a larger population leads to faster technological progress.

3. Parents in poor countries have economic reasons for wanting large families; these diminish with the process of development and birth rates tend to fall. Although large families do impose social costs on people other than the parents, in the long run these costs are offset by the gains from population growth. Since this is true for income per person, it is also true for human welfare; other things being

Table 1:
Projected Population Densities, Selected Countries

	Population (in millions)			People per square kilometer of land			People per square kilometer of cropland*			Labor force active in agriculture
Countries	1980	2010	Ultimate	1980	2010	Ultimate	1980	2010	Ultimate	(%) 1980
Egypt	42.3	72.9	114	43	73	114	1489	2569	4017	50
Kenya	16.2	57.1	153	29	100	269	712	2516	6740	78
Rwanda	5.2	15.1	47	208	606	1884	541	1576	4896	91
El Salvador	4.8	9.8	17	234	473	819	713	1443	2497	50
Jamaica	2.2	3.2	4	202	299	367	826	1225	1499	35
Bangladesh	88.5	200.3	454	661	1496	3391	969	2194	4975	74
China	980.3	1312.2	1461	105	141	1574	984	1317	14714	69
India	687.3	1128.4	1707	231	379	574	407	670	1013	71
Indonesia	146.3	241.8	370	81	134	204	894	1477	2261	58
Republic of Korea	38.1	55.5	70	388	565	713	1713	2496	3149	34
Sri Lanka	14.7	23.7	32	227	366	494	686	1104	1491	54
Vietnam	54.2	104.9	171	166	323	525	925	1791	2920	71
Netherlands	14.1	15.6	15	413	457	441	1649	1819	1750	6
Japan	116.8	131.8	128	315	418	345	2365	3139	2591	12

*Cropland comprises all arable land: land generally under temporary crops, land used for temporary meadows, for market or kitchen gardens or for cultivation under grass, land temporarily fallow, as well as land under permanent crops.

Source: Population and labor force: World Bank
Land: U.N. Food and Agriculture Organization

equal, the more people there are, the larger the sum total of human happiness.

What are we to make of these arguments?

Simon's views on resource scarcities and substitution possibilities are not very different from those of the majority of economists. This does not guarantee their accuracy. History can be a bad guide to the future. Developed countries overcame their periods of relatively rapid population growth apparently without jeopardizing their economic progress or running into Malthusian constraints. But this might be misleading.

Population growth in Europe and areas of European settlement was almost universally lower, even at its peak, than it has been in almost any developing country since 1950. Except in the countries of new settlement, rates of population growth remained below 2 percent per year, usually well below that.[9] Fertility was lower than contemporary fertility in most developing countries, even before it began to decline. Birth rates were seldom as high as 40 per 1,000, death rates were generally higher than in today's developing countries.

Demographic pressures in Europe were also eased by international migration. Although even at its peak (1881-1910), net emigration averaged only 14.4 percent of the growth in population, it was much more significant in relieving points of particular population pressure.[10] Ireland is the most striking case. During the decade 1851-61 annual (gross) emigration averaged 1.9 percent of its (decennial) mean population and averaged about 1.3 percent for the remainder of the century. In the 1880s, more than 7 percent of the Scandinavian population emigrated to the United States; more than 6 percent of Italy's population emigrated to the U.S. between 1905 and 1914.[11]

In contrast, there are very few countries classified as developing whose population growth rates have been as low as 2 percent during the past 20 years. Birth rates well above 40 per 1,000 are common. Emigration possibilities are limited. So the countries where population growth is pressing most strongly experience different conditions from those faced in the past.

Both Malthusians and anti-Malthusians can be faulted for focusing on population-resource issues on a *global* rather than a country by country basis. At present population density varies widely. Certain nation states will not support the citizens of other nations indefinitely. The right to exclude immigrants is virtually unchallenged. With a few exceptions, the

Tea picking, Kenya

population of most countries will be the descendants of their present population. Their relative size will not be significantly affected even by temporary international migration. Projecting national populations independently indicates where the main pressures of rapid population growth are likely to occur.

Table 1 is based on World Bank *World Development Report 1984* population projections for some of the most densely populated developing countries. Oil exporters, except for Indonesia, and city states, such as Singapore and Hong Kong, are excluded. The Netherlands and Japan, as the most densely populated industrial countries, are included for comparison. Although its inclusion in the table is not strictly justified by its 1980 density, Kenya is included to show how rapid population growth combined with a low proportion of arable land may produce a disturbingly high population density.

In making these projections, the year in which a country's declining fertility would reach replacement level was derived based on recent fertility rates, birth rate changes, and family planning performance and policy. Upon achieving this level, fertility was held constant at replacement level until eventually the population became stationary. For Japan and the Netherlands, fertility was assumed to *rise* to replacement by 2005.

Simon argues that the amount of arable land has risen in most parts of the world through clearing, reclamation and so on. Yet the average increase in arable land has been less than 1 percent per year. These increases in arable land are probably smaller in the areas already subject to the greatest population pressure, and this new land is likely to have lower agricultural potential. Even if this were not the case, and even if past growth rates of land availability continued, the picture presented in Table 1 would not be fundamentally changed.

Density does not reflect all the dimensions of the problem. However, its usefulness as a measure increases as populations in specific areas increase in size. In the distant past when movement was unconstrained by national boundaries, the density of settlement was probably greatly influenced by the fertility of the land. More fertile areas attracted newcomers and relieved Malthusian pressures elsewhere. With the emergence of nation states, movement created greater conflict, even wars when it threatened the territorial sovereignty of a neighbor. Today, such movement involves much greater risks and costs, and is often more restricted.

Several of the countries included in this table face future population densities greater than modern Japan—sometimes strikingly greater, as with Bangladesh and Egypt. At present, Bangladesh, unlike Egypt, has very low crop yields. Raising Bangladesh's crop yields to world standards could bring a great deal of economic growth. Yet it seems inconceivable that either of these countries (or most of those on the list) can raise their economies to

Fish farm, Bangladesh

developed country levels without a major change in their patterns of economic activity.

As development proceeds, all developing countries can expect a shift in the occupational structure of their labor force that will markedly reduce the share of the population engaged in agriculture. This structural shift is greatly impeded by the high costs of industrial development, but it can be expected irrespective of the pattern of a country's international trade. Even New Zealand now has only 10 percent of its economically active population working in agriculture. In densely populated developing countries, the transition probably will have to come earlier and faster, since the need to finance growing food imports is likely to be serious. As Table 1 shows, a high, and sometimes overwhelming, proportion of the labor force of these countries is still engaged in agriculture, so that the magnitude of the structural shift required is enormous.

This table should not be interpreted as implying that Bangladesh necessarily faces a Malthusian crisis. Nevertheless, it highlights the fact that in parts of South Asia and Africa such a crisis canot be ruled out. Complacency based on the history of developed countries is thus little short of amazing.

Simon makes the point that natural resource prices tend to fall in the long run. But to think that the price of a resource is always the best indication of scarcity is misleading. For example, economist Amartya Sen has recently brought together evidence that modern famines are not as much a consequence of a physical shortage of food in the affected areas as of a drop in the purchasing power in the affected population.[17] One can imagine a situation where drought drastically reduces the crops of subsistence farmers leading to widespread starvation, while the prices of marketed crops grown under irrigation remain relatively unaffected. Food is not scarce, but the poorest people lack money to purchase it. Similarly, a grain shortfall in the Soviet Union will have much more impact on world prices than a comparable one in Bangladesh, since the former can afford to maintain its consumption through imports and the latter cannot.

While Simon bases his own optimism on extrapolations of history, he is skeptical of the ability of demographers to do the same, and points out that the size of populations has fallen as well as risen. Trends in low-fertility populations have proven difficult to predict; small changes imply very different outcomes in the long run. Also, demographers in the 1940s did not anticipate the rapidity of the fall in postwar death rates in the developing world. But demographers have not significantly changed their views on the prospects for developing countries during the past quarter century.[13] Also, there has been considerable improvement in data, and forecasts for individual countries frequently reflect this improvement.

When discussing the relationship between population growth and economic growth, it is important to recognize the context in which the issue is posed. There *are* positive aspects in the modest population growth of about .5 to 1 percent experienced by many developed countries since the World War II, but there are still costs. It is easier to take advantage of new opportunities for production and to change the patterns of labor skills if the labor force is growing, rather than stationary. Supporting the retired population is also less of a burden. Even though a growing population requires new housing, schools and so on, these are not as great a burden in a growing economy. Three percent growth in a *poor struggling* economy—indeed in any economy—is a very different proposition. Simon has remarkably little to say about this.

Simon's arguments center on the savings gained by sharing the costs of modernization among a larger population. These savings certainly exist. It is obvious that, other things being equal, it takes more investment per person to build roads and ports in a more sparsely populated country. The problem is that these are savings based on population *size*, not population *growth*. Simon implies that a larger population size leads to a larger GNP. Even if true, there are bound to be considerable costs imposed by the population growth needed to achieve it.

In this line of argument, savings gained by sharing modernization costs among a larger population partly offset Malthusian worries about diminishing returns in natural resource-based sectors, such as farming and mining. Such savings substantiate the belief that the most desirable rate of population growth is not necessarily zero, but might be slightly positive. Yet these savings provide very little comfort in the context of current high population growth rates in most developing countries.

Like many other pronatalist authors, Simon points out that the more human beings there are, the greater the potential of the human race. While this must in some sense be true, it is quite clear that population size has had very little to do with the periods and places in which human genius has flourished in the past. Greece, at the peak of its artistic, literary, scientific and philosophical achievement, between the sixth and fourth centuries B.C., had a total population of 2 to 3 million, and Athens itself only about 200,000.[14] Shakespeare, Donne, Marlowe and Spenser were contemporaries at a time when the population of the English-speaking world was about the same scale (7 million) as that of Mali or Guatemala today. In fairness, Simon appears less concerned with rare genius than with more mundane technological improvements. But even this is much more likely to be a function of the size of economic activity and of educational levels than of the numbers of people inhabiting a given geographic area.

The More, The Better?

To this writer, at least, Simon has had very little success at demolishing the case for limiting population growth—at least with respect to the high rates of population growth common in developing countries—or at establishing a pronatalist case of his own. At this point, however, a libertarian might argue "Whoever said it was the business of society to maximize per capita income anyway?" Parents are rational, they make conscious choices about family size in both rich and poor countries. They receive unmeasured benefits from a sense of security and perhaps (though much more doubtfully)[16] direct economic advantage from having many children; above all, they derive pleasure from their offspring. If, in reply, it was argued that children impose social as well as private costs, the conservative response would be that the state should not subsidize children through free education; at most, student loans and family planning information should be provided.

But the social costs of additional offspring are not simply the public services they consume. A person competes with his or her contemporaries: a larger group entering the labor force lowers wages for all and a larger farming population forces the use of marginal land. In this sense, it is in the interest of members of the next generation for that generation to be smaller.

It might be argued, as Simon does in his chapter entitled "Ultimately—What Are Your Values?," that this would entail a loss of social welfare, arising from the absence of happiness that would have been experienced by those who would have been born if the generation were larger. This is an old controversy, but in my view there is only one sensible answer. Happiness is not something that exists in a disembodied state; it must be attributed to individuals. If an individual does not exist, we cannot talk about his or her loss of happiness.

Why Now?

Why have these arguments received so much public attention at this time? One can only speculate, but to do so is instructive. The media characterized the Reagan Administration's policy change at the Mexico City population conference as an attempt to shore up New Right voters before the 1984 elections. This assessment may be accurate, but only partially so.

The root of the problem appears to be the tendency of many of those most concerned with the problems of rapid population growth to exaggerate its significance. The oversimplification of complex issues, the attribution of many social ills to one cause, and the forecasts of imminent catastrophe may attract attention and sell books, but inevitably lead to a backlash sooner or later.

In spite of an increasing amount of research and a sophisticated discussion of population issues within the scientific community, in the public mind population growth has become associated with global Malthusian catastrophe rather than with prolonging the miseries of the world's poorest people. A book that allays fears about Malthusian catastrophe and virtually ignores world poverty is appealing to the extent that it appears to dispel the population problem.

Second, the widespread view that government regulation has been tiresome and costly has led to a reaction against trying to solve social problems through public action. Anyone who suggests that involving government in population matters is unnecessary can be assured sympathetic attention.

Back to First Principles

Simon's message is simple and appealing, but harmfully misleading for public policy. Population growth, especially rapid growth in the poorest countries, remains a matter of very deep concern, and continues to require social action. More than two decades of serious debate have led to a consensus on some principles on which to base policy.

1. The "population problem" varies between nations and is not simply a result of global numbers.

2. For many countries, especially in parts of Asia and Africa, food supply remains a serious problem.

3. For these, and many other countries, including Mexico and most of Latin America, the main worry about rapid population growth is that it aggravates problems caused by poverty, such as malnutrition, illiteracy, and underemployment. Demographic growth is not the sole cause of these problems, but it makes them harder to solve.

4. Development programs that reduce poverty contribute to solving demographic problems. They reduce the number of children wanted and encourage parents to devote resources to the health and education of their children.

Nutrition class, India

5. Population programs complement rather than compete with these efforts. Slowing population growth allows time to invest in the quality of the life of individuals who are, as Simon correctly notes, the "ultimate resource."

6. Fertility norms can be changed non-coercively. Helping parents to achieve smaller families by making family planning services freely available and widely known is especially important.

Though these principles are generally accepted, they need to be applied. More research and policy analysis at the country level is needed. How individuals respond to alternative policies is still poorly understood. Designing effective development and demographic policies for individual countries requires a great deal of careful analysis and discussion. The population debate must concentrate on these issues, not on reiterating, or on refuting, global Malthusianism.

Family planning visit, Mauritius

Footnotes

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12. Kuznets, *Modern Economic Growth*, p. 55.
13. Sen, Amartya, "Famines," *World Development* Vol. 8 (1980) pp. 613-621.
14. The United Nations' medium variant projection for the world population in the year 2000 was 6.3 billion in the projection made in 1958, 6.5 billion in 1968, and 6.1 billion in that made in 1980. Over that period the projection for less developed countries rose by less than 3 percent (from 4,720 million to 4,850 million); that for more developed countries fell by more than 11 percent (from 1,430 million to 1,270 million).
15. Clark, *Population Growth and Land Use*, pp. 89-90.
16. It is likely that many parents do believe that children are a good investment, quite apart from their other values. The limited research information suggests that children are an economic drain. See Repetto, Robert G., "Direct Economic Costs and Value of Children" and Eva Mueller, "The Economic Value of Children in Peasant Agriculture," both in Ronald G. Ridker (ed.) *Population and Development: The Search for Selective Interventions* (Baltimore: Johns Hopkins, 1976) pp. 77-153. Mead Cain interprets his findings on the work activities of children in Bangladesh as evidence that high fertility may be economically rational, but this greatly depends on the opportunity cost of resources in the years before children begin to cover their own costs (about age 12). See Cain, Mead T., "The Economic Activities of Children in a Village in Bangladesh," *Population and Development Review* Vol. 3 (September 1977).

The Population Debate: A Status Report and Revisionist Interpretation

by Allen C. Kelley

Steelwork

A fresh look at the impact of population growth on the economic development of the Third World is needed, for it is time to recognize that the "traditional" arguments may require modification.

For almost 200 years, scholars and policymakers have been concerned about population and development. Seldom has an issue of scientific inquiry been charged with such emotion. And numerous scholars have adopted antinatalist positions, maintaining that many problems of underdevelopment will be solved largely by slowing population growth through limiting the number of births. Even a value-laden vocabulary is used: "the population problem," the Malthusian "devil" or "crisis," and the "burden of dependency."

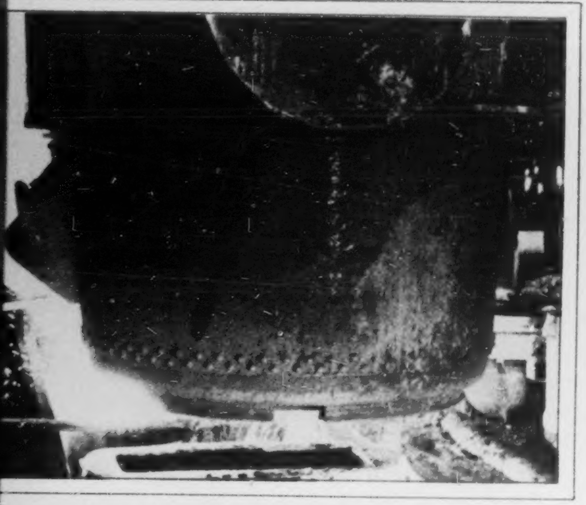
This sentiment persists despite a literature that, on balance, would lead to a more cautious position. For example, Malthus' predictions were not verified for the countries he studied; slow population growth was considered a cause of the economic stagnation of the 1930s; and many development scholars and historians concluded that population growth often stimulated rather than deterred the economic progress of presently developed countries. The state of knowledge in 1960 on population and its relationship to economic development was accurately summarized by Nobel Prize laureate Simon Kuznets:

> we have not tested, or even approximated, empirical coefficients with which to weigh the various positive and negative aspects of population growth. While we may be able to distinguish advantages and disadvantages, we rarely know the character of the function that relates them to different magnitudes of population growth.[1]

Viewed from a scientific perspective, it is thus surprising that the tide of popular opinion on the role of population growth could place it as *a*, and possibly *the* major obstacle to the economic growth of the Third World. Public statements by leaders of international organizations such as the World Bank and the United Nations and (until recently) U.S. governmental agencies such as the Agency for International Development reflected these sentiments.[2] For example, in a 1973 speech former World Bank president Robert S. McNamara compared population growth with nuclear conflict:

> the greatest single obstacle to the economic and social advancement of the majority of peoples in the underdeveloped world is rampant population growth. . . . The threat of unmanageable population pressures is much like the threat of nuclear war. . . . Both threats can and will have catastrophic consequences unless they are dealt with rapidly and rationally.[3]

In the minds of many, the population debate was "closed" during the 1970s. Rapid rates of population growth strongly retarded economic development in the Third World. Research has focused on the *causes*, in contrast to the *consequences*, of population change. Government programs emphasized family planning.[4] To the surprise of many, the population debate was "re-opened" in the early 1980s culminating in a near-reversal in the U.S. policy position at the U.N.'s International Conference on Population in Mexico City during August, 1984. Timothy King, senior economist at the World Bank, suggests two reasons for the new debate in his paper "Population and Development: Back to First Principles." First, "[There has been] . . . a tendency of many of those most concerned with the problems of rapid population growth to exaggerate its significance." In other words, the antinatalist case has been overstated; the present resurgence of interest represents a backlash. Second, some of the most important arguments rs, Brazil



Garment worker, Kenya

and evidence that formed the basis of the antinatalist positions must be qualified. Two other recent reports complement King's study: one, entitled "Consequences of Rapid Population Growth: An Overview and Assessment," is by Geoffrey McNicoll, a research scholar at the Population Council in New York; a second, the *World Development Report 1984 (WDR 1984)*, is by the World Bank.

Taken together, these three recent studies provide a status report and a basis for a new "revisionist" interpretation of the role of population in development. Each study concludes that the net impact of rapid population growth is detrimental to economic development. However, the intensity of this conclusion and the reasons for it vary from the traditional antinatalist approach. A revisionist position composed of four main arguments may be emerging: (1) the negative impact of population growth is not nearly as great as the alarmist statements of the past claimed;[5] (2) population growth is not the primary direct cause of the major constraints to Third World development; (3) some of the previous antinatalist arguments have not proven empirically sound; and (4) an analysis of the economic impact of rapid population growth should not ignore its previously de-emphasized *indirect* effects such as the effect of rapid growth on a country's adoption of new technology or its ability to educate its citizens.[6]

In this paper, I will briefly evaluate the two most important antinatalist arguments that have dominated the population debate over the last 25 years, drawing heavily on the three studies cited above. Next, I will assess the extent to which these arguments have successfully included the indirect effects of population growth on an economy in order to determine the *net* impact of population. Finally, I will discuss an emerging revisionist interpretation of the role of population in development.

King's paper focuses on selected pronatalist arguments; to provide balance, I will address aspects of the antinatalist position. This is not intended to reflect a pro- or anti-population stance. My position, long held, is that on scientific grounds, and focusing primarily on economic impact, neither the arguments nor the various models used by the antinatalists sufficiently support the *strength* of the *general* conclusion that population growth exerts a strong adverse impact on the economy. Indeed, I will support my position by citing recent antinatalist writings! I eschew the "extremism" and "alarmism" common in the population debate. This alarmism has been, and continues to be, counterproductive to the analysis and the formulation of Third World development policies. A revisionist interpretation of the impact of rapid population growth is required that places population not as the lead character, but as an accomplice in a complex plot.

The First Antinatalist Argument: Land and Resource Scarcity

Proposition I: *Mitigating forces will not offset the increasing scarcity of, and diminishing returns to land caused by rapid population growth. As a result, food production will not keep pace with population growth and development will be seriously constrained.*

This is largely an empirical issue. Recent studies suggest:

1) The world is able to produce sufficient food for future generations well into the 21st century.[7]
2) Most Third World countries will be able to meet their own minimum food needs in the year 2000 assuming moderate uses of technology, although some (especially in sub-Saharan Africa) will not be able to meet their needs and will require outside assistance.[8]
3) The availability of potentially arable land will not seriously constrain future agricultural expansion, although the costs of reclaiming land are rising.[9]
4) Possibilities for improving agricultural productivity, the main source of expanding future yields, are substantial.[10]
5) The greatest constraints on agricultural expansion are (a) lack of incentives to expand production caused in part by government policy, (b) the lack of mechanisms for generating investment resources (e.g., rural credit) to use existing and new technologies, and (c) poor management of land and water resources.[11]

The "agricultural problem" of insufficient food production to meet the country or world minimum needs does not appear to be primarily a population problem. If population growth were slower, food imbalances would emerge later, but these imbalances would not be eliminated. Population growth probably is not the villain in the food balance story, but it is an accomplice. For example, if population growth increases income inequality, and if income constitutes the main means for obtaining food, then indirectly population growth can aggravate the food-population balance for an individual or family. However, this income-distribution effect can be offset completely or in part by government policy.

One should not be complacent about the seriousness of the food shortages. Famine still threatens many Third World countries. Yet in the future, as in the past, famines will be largely the result of inadequate *distribution* of food (e.g., inadequate income to purchase food) rather than the result of insufficient production and/or availability.[12]

Nor should one ignore the potential for increased agricultural production or the consequences of many government policies that deter production. Policies that turn the terms of trade against farmers in order to stimulate industrialization and keep food prices low for urban dwellers are common in Third World economies. For example, agriculture is often heavily taxed, agricultural investment (rural credit or extension services) is given relatively low priority, and overvalued exchange rates encourage capital-intensive production methods requiring relatively few workers. The *WDR 1983* highlighted the role government policy plays in slowing the growth rates in the gross domestic product (GDP) of 31 developing countries. Not only did the World Bank find that greater price distortions brought slower growth rates, it stated that "... the price distortions can explain about one-third of the variation in growth performance [in GDP among developing countries]."[13] The time has come to abandon the view of population growth as *the* villain in the food-balance problem, and to direct more attention to the root causes so well documented in an expanding literature.[14] Blaming population growth for the "food problem" can divert attention from those policies that will bring about a long-run solution to the fundamental constraints on agricultural development.

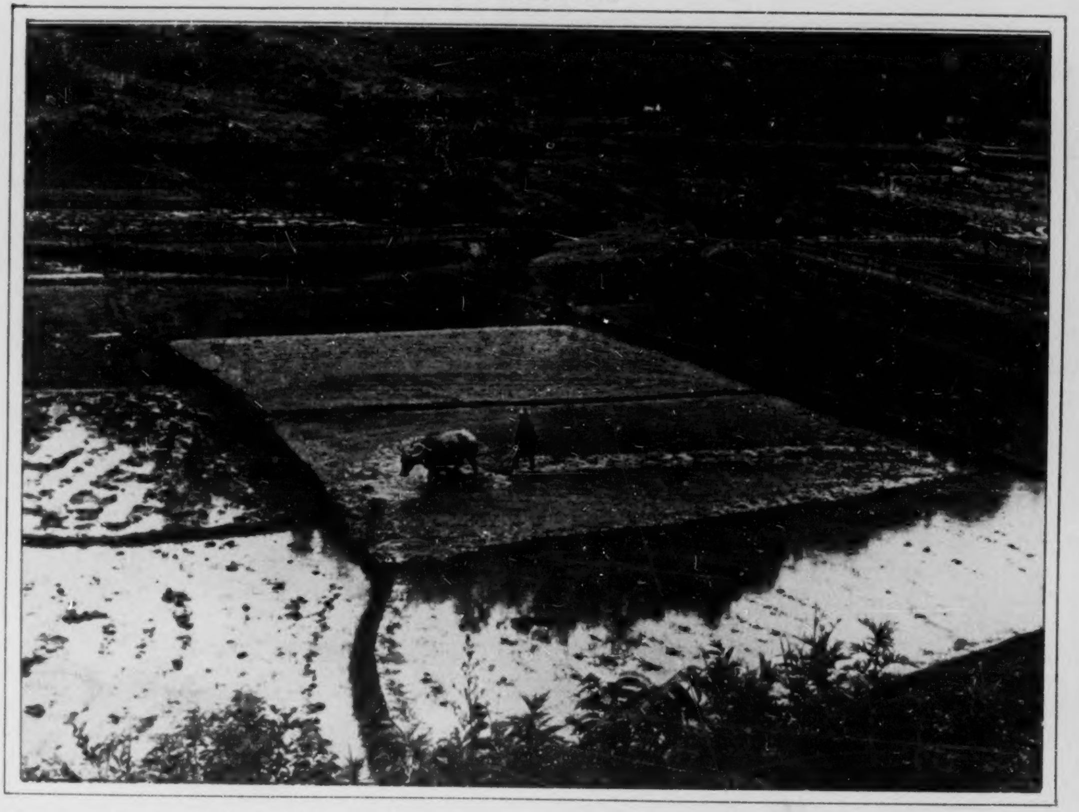
Proposition II. *Rapid depletion of natural resources caused by rapid population growth will substantially limit economic development.*

This argument is untenable for several reasons. First, evidence indicates that natural resource use is related more to rising per capita income than to population size per se.[15] Ironically, if population growth deters the growth of per capita income, then a slowing of population growth could increase the rate of resource depletion. Of course, multiplying income per capita by larger population sizes magnifies the demand for resources.

Second, evidence indicates that rising natural resource prices (due to scarcity) spur a search for substitutes, stimulate investment in discovering new sources of the resource, and cause consumers and producers to practice conservation.[16] Third, estimates of static resource supplies, the primary basis of "resource pessimism," have typically been wrong.[17] Finally, the research required to assess the way natural resources combine with labor and capital, and the way technology changes in the short and long run in response to natural resource scarcity, is only beginning to yield clues about the relationship between natural resource depletion and population growth.[18]

Reviews of the impact of population growth on development place the above Malthusian and neo-Malthusian concerns in perspective.

King's assessment is that neo-Malthusian arguments are much less important than the food-population balance. He argues that "For the purpose of discussing population growth, therefore, Malthusian issues are best applied to the traditional question of food supplies." This is because the demand for other nonrenewable resources "... reflects the consequences of rising income and production per per-



Rice field, Burma

son, at least as much as an increase in the number of people." In the area of food, he stresses the importance of a country-specific food balance, with each country being able to feed its people. The evidence he presents on land densities as an indicator of the problem is not overly helpful. In particular, factors other than land density are much more important to explaining the inability of obtaining country-specific food balance. With respect to the food situation in the area of greatest concern (sub-Saharan Africa), King's statement merits emphasis: "Blaming this poor performance on growing population pressure is wrong; limited technology and weak incentives to producers are probably the major culprits."

The *WDR 1984* provides an analysis of the Malthusian issue that is roughly consistent with my assessment. The importance of natural resources is significantly down played. "The difficulties caused by rapid population growth are not primarily due to finite natural resources, at least not for the world as a whole."[19] The relevance of country-specific food balance, the depletion of wood fuels, and the desertification of land are stressed. The primary cause of natural resource scarcity is not population directly, but rapid population growth does aggravate the problem. The *WDR 1984* concludes: "Nor is population growth in and of itself the main cause of natural resource problems—air pollution, soil degradation, even food availability."[20] This is a revisionist perspective. Population growth serves to reveal *sooner* the symptoms of underlying problems, but many of the solutions are to be found in areas other than in altering the rate of population growth.

In Summary. Malthusian and neo-Malthusian concerns about population are de-emphasized in recent analyses of population. Population growth is viewed less as a cause and more as an agent that pushes more fundamental problems to the forefront. Empirical evidence in the areas of nonrenewable resource constraints is not sufficient to make any strong conclusion about the impact of rapid population growth in the long run. In the area of food, the problem is more one of unrealized potential for increasing agricultural output and unequal *distribution* of income, rather than of diminishing returns to land.

Father and daughter, Yemen

The Second Antinatalist Argument: Saving and Investment

Proposition I. *Rapid population growth leads to a high ratio of children to working adults. This diverts household income away from saving and toward consumption.*

This argument requires substantial qualification on theoretical grounds, and its predictions have not been generally established.

At the level of the individual household, characterizing children as consumers and not producers is excessively narrow. The issue is how the family "finances" the goods and services needed by children. It is implausible that all or even most of this financing will be from savings. Indeed, in very poor households such an option may not exist. Moreover, children may in part substitute for other forms of consumption, may contribute directly to household market and non-market income, may stimulate parents to work more (or less) and/or harder, may encourage the accumulation of certain types of assets (e.g., education), and may stimulate the amassing (or reduction) of estates.

Three decades of research since this age-dependency thesis first gained popularity have revealed that the impact of children on household saving is uncertain and weak.[21] According to the *WDR 1984*: "Recent empirical studies find only minor support for this view;"[22] and Timothy King states: "In the litany of antinatalist arguments, however, this one bears little weight ... but most modern theories suggest that the proportion of children in the population is not very important."

I conclude that the antinatalist argument based on the age-dependency effect of rapid population growth on saving is not robust on theoretical or on empirical grounds. The irony of this conclusion is that the above proposition was frequently cited as a basis for U.S. population policy in the Third World. According to population specialist Phyllis Piotrow, the argument that "a reduced rate of population growth would always mean additional funds for capital investment because it would produce fewer dependents and smaller expenditures for consumption and social needs [known as the Coale-Hoover thesis after Princeton demographer Ansley Coale and economist Edgar Hoover] ... eventually provided the justification for birth control as part of U.S. foreign policy."[23]

Proposition II. *A rapidly growing population generates a strong demand for government expenditures in areas such as education and health, thereby diverting funds from relatively productive, growth-oriented public and private investments.*

This argument also requires theoretical qualification, and relevant evidence to substantiate it is generally lacking.

First, there is very little empirical evidence on the impact of demographic change on the total share of government spending in Third World countries. One recent study suggests that this is relatively insensitive to the youthful age of the population and is more sensitive to the location of the population (i.e., urban areas).[24]

Second, even if a rapidly growing population does indeed generate demands for youth-oriented expenditures, it is also true that a slowly growing population exerts demands for expenditures for the elderly. It is not clear which composition of spending is more "growth oriented."[25]

Finally, the impact of economic growth of investing in education *relative to* other uses of funds (e.g., bridges, military, factories) determines the *net* impact of growth of shifting expenditures toward education. Only if it is assumed (or demonstrated) that educational expenditures are relatively "unproductive" and that such expenditures are financed at the expense of investment (as distinct from consumption) can the antinatalist composition-of-investment argument be sustained.

Many studies, including the *WDR 1984*, have shown that the costs of educating a rapidly growing population can be substantial. This, however, avoids the relevant empirical test. Instead, studies are needed that demonstrate that such expenditures come at the expense of relatively more productive investment (public and/or private).[26] The research must be constructed in such a way as to reveal the trade-offs within and between government and private spending, and the relative productivity (effect on economic growth) of these trade-offs.[27]

Proposition III. *Population growth results in less capital per worker or "capital-shallowing" since there is nothing about population growth per se that stimulates per capita saving.*

Once again I would argue that this proposition needs qualifying. In particular, the theory of saving that shows rapid population growth giving rise to strong capital-shallowing effects is narrow. In fact, rapid population growth leads to a relative abundance of labor vis-a-vis capital and land. As a result, the returns to the owners of capital and land will likely increase. Since owners of capital and land are likely to be the larger savers, the distribution-of-income effect on saving (and resulting investment) caused by population growth may offset the forces of capital-shallowing. Moreover, even if less capital per worker diverts investment funds from physical to human capital (education and health), as economist Robert Cassen has argued: "The real question [is] that of whether such educated and healthy people make a greater contribution to the economy than would be achieved by using the capital to raise the output of a smaller population."[28]

Evidence on the causes of household saving is scarce for Third World countries. There is, however, evidence that suggests that the impact of population growth on saving (skewing income toward the higher savers) can reduce the capital-shallowing effects highlighted in the literature.[29]

In Summary. The results of economic research have not provided convincing evidence to support the strength of the antinatalist concern about the adverse effect rapid population growth has on savings and investment. Authors of recent reviews of the literature de-emphasize this impact. Timothy King notes: ". . . the determinants of savings and investment are not well understood. . ." and Geoffrey McNicoll observes: "What then can be said about the net savings or investment impact of rapid population growth? The answer appears to be very little." He further argues that development theory is placing less weight on the role of physical capital as the key determinant of development. Such a reorientation is consistent with the *WDR 1984* which says relatively little about the capital-shallowing or age-distributional effects of population on saving within an economy but a great deal about the impact of population on the level and composition of investments in *human* capital—education, and to a lesser extent, health.

Measuring the Net Impact of Population Growth

Assessing the overall economic impact of rapid population growth is not an easy task. Typically, it is done by studying the combined impact of the various direct effects of population growth, such as resource depletion and lack of savings. This method

Urban planning survey, Venezuela

produces tenuous results for two reasons. First, a convincing body of empirical evidence to properly weight the direct effects of population growth is still lacking. Second, and more important, population exerts not only *direct*, but also *indirect* effects; these indirect "feedbacks" can substantially alter an assessment of population growth's full role in economic development.

Moreover, focusing on the direct effects produces a biased view: the role of population growth is *overstated*. For example, consider the key antinatalist position. Here the emphasis is on the resource-using aspects of population growth—population growth lowers the ratio of people to resources (e.g., capital, land, minerals, water, etc.) and impedes development. But what about indirect effects that can augment or mitigate these direct effects? Indirect effects include a rise in the price of the scarce resources causing conservation of their use and expansion of their supply. An accurate appraisal of the net impact of population must take these indirect effects into account.

This can be accomplished by formulating economic models that incorporate the direct and indirect effects of population growth so as to reveal their net effect on the economy of a country, a region or the world. Several models have been constructed, but the best known are ill-equipped to assess the full net impact of population on development. Indeed, they ignore the indirect effects.

Consider the most popular models that have revealed population's detrimental impact on development: the country-specific TEMPO models that highlight the capital-shallowing effects of rapid population growth, and the *Limits to Growth* model that highlights constraints on natural resources. Neither of these models incorporates even minimally the indirect effects discussed above. Hence, they are more devices of persuasion than scientific tools to advance our knowledge on the interaction of population growth and the economy.[31] Is it possible, then, to draw supportable conclusions from these models? The answer is no.

Fortunately, another type of model promises to

Wheat conservation, India

represent more accurately the role of population in the economy. These are "computable general equilibrium" (CGE) models, which emphasize the indirect effects of population growth. Such models reflect the conservation and substitution that occur when a resource becomes scarce. While most CGE models have not focused on population growth or demographic change, those that have reveal that *rapid population growth has a much smaller impact on economic development when indirect effects are considered.*

The key results of CGE models on population growth reveal: (1) rapid population growth can slow the growth of per capita production, but this impact may be reduced if the rapid population growth also leads to a larger gap between the incomes of the rich and poor and increases the savings of the rich, thus reducing the capital-shallowing effect;[32] (2) rapid population growth can stimulate urbanization through rural to urban migration, but this displacement of farm labor may be offset by other influences such as rising urban costs;[33] (3) rapid population growth can produce unequal income distribution but feedbacks are set in motion to reduce this impact, and other factors play a larger role in skewing income distribution as economic development occurs.[34]

Appropriately, the King paper and the *WDR 1984* are largely silent on the results of the popular models including TEMPO and *Limits to Growth.* McNicoll does note that the new CGE models will be useful in revealing selected effects of population growth. However, he is skeptical about the use of economic models in general since they exclude non-economic factors such as social structures, administrative organizations, and political systems.

I conclude that the antinatalist case that is based in part on the several popular models is flawed, for such models are analytically and empirically ill-equipped. Nevertheless, CGE models promise to provide at least one useful assessment, but this approach is new and the models developed to date are more suggestive than conclusive. They illustrate the critical importance of the indirect effects of population growth. They also signal the direction in which future research can provide a more balanced and rigorous assessment of the role of population growth in the economy.

A Revisionist Interpretation

A revisionist interpretation of the role of population growth in economic development is emerging. In the past, antinatalists have stressed the direct and strongly negative impact of population growth on food availability, resource depletion, saving, government expenditures, and investment productivity. Theoretical and empirical research lead to a modified position. This is especially true if the indirect effects of population growth are taken into account and if it is recognized that several of the most basic causes of underdevelopment are factors other than population size and growth.

A revisionist interpretation thus (1) de-emphasizes some of the "traditional" hypothesized direct influences of population, and (2) assigns population the role of an accomplice in contrast to the leading role of villain (or hero) in the development story. To this list I would add the importance of (3) the *pace* of population growth, and (4) the political response to it.

The first and second elements of this revisionist interpretation constitute the thrust of this paper. They are supported by King who concludes that population "aggravates" poverty, but recognizes that other causes are much more important; and by the *WDR 1984* which portrays population in the role of "exacerbating" more fundamental problems.

The third and fourth elements of a revisionist interpretation relate to the implications of the *pace of change* (the dynamics) of population in the development process and government response to this change. That pace can be viewed as a largely independent influence, and it has direct consequences that are seldom highlighted but no less important. Rapid, as distinct from moderate or slow population growth, (1) advances the time in which problems are encountered, and (2) shortens the time available to resolve problems. The question is whether this rapid pace contributes to, or deters, development. This is mainly a question of political economy. Two problems commonly attributed to population growth will serve to illustrate some of the relevant considerations here.

The first problem is that of food imbalance, which was discussed earlier. For many countries a main cause of this food shortage is government policy that penalizes agriculture through imposing taxes and subsidies that twist the terms of trade against farmers, thereby reducing incentives to produce and innovate. One impact of rapid population growth is to bring this problem to a head sooner. It also forces a more rapid response. The critical question, is whether such "time pressure" is more or less likely to bring about changes that will address the *causes* of the problem (e.g., often ill-advised government policies), or the manifestations of problems (e.g., malnutrition or starvation). Some would argue that the causes of problems are more likely to be addressed in "crisis settings;" others would argue that the short-run perspectives of government leaders are reinforced in dealing with seemingly short-run problems (e.g., famine), and long-run solutions are more likely to be bypassed.

A second problem relates to high rates of unemployed or underemployed people in Third World cities. Again, one important cause of this problem is government policies that encourage using capital-intensive technology requiring relatively fewer workers amidst a labor surplus. Rapid population growth reveals the problem sooner, and given its magnitude, encourages a decisive and rapid response. And again, the question is whether the pressure of time results in a resolution of the fundamental causes (e.g., realigning exchange rates and reducing penalties toward agricultural production) or just a treatment of the symptoms (e.g., employing workers in relatively unproductive public sector jobs). The *WDR 1984* offers examples of the latter type of political response.[35] What is not clear, however, is whether more moderate rates of population growth would have led to more enlightened public policies.

Market, Ecuador

The population debate is entering a new phase. Population growth is not viewed as a villain but rather as an accomplice, and a broader interpretation of its interaction with development issues such as food production and unemployment, and even government policy formulation, is being examined. Thus, unemployment is seen as the result of other factors besides population growth. According to the *WDR 1984*:

> The adoption of trade and exchange rate policies that do not penalize labor and the dismantling of institutional barriers to creating jobs would ease the employment problem.[36]

And the food-balance problems are being seen as the results of other factors besides population growth. According to the *WDR 1984*:

> Pricing policies in agriculture and more resources allocated to rural credit, agricultural research and extension, and so forth, would increase agricultural output.[37]

Such a revisionist perspective on the role of population is revealed by comparing the alarmist assessment of former World Bank President Robert S. McNamara (quoted earlier), who compared population growth with the threat of nuclear war, with the moderate appraisal of his successor, A.W. Clausen, who emphasizes the more fundamental causes of poverty. Referring to the poorest of the Third World countries, and noting that slowing population growth can make a difference, he concludes:

> The poverty of those areas cannot be blamed on rapid population growth alone; the causes of poverty go well beyond population change. Nor will reducing population growth alone ensure their economic transformation.[38]

We must take seriously what we have learned in recent decades about the underlying causes of underdevelopment, and place population growth in a balanced perspective whereby the causes, and not the symptoms, of poverty are addressed.

Farmer, Gambia

Footnotes

1. Kuznets, Simon. "Population Change and Aggregate Output." *Demographic and Economic Change in Developed Countries* (Princeton: Princeton University Press, 1960).
2. For an excellent summary of the evolution of American population policy, see Piotrow, P.T., *World Population Crisis: The United States Response* (New York: Praeger Publishers, 1973).
3. McNamara, Robert S., *One Hundred Countries, Two Billion People: The Dimensions of Development* (London: Pall Mall Press, 1973) pp. 31, 45-46.
4. These programs can also be justified on substantial grounds other than those of simply promoting development. See World Bank, *World Development Report 1984* (New York: Oxford University Press, 1984) chs. 6-7.
5. Curiously, the World Bank, *WDR 1984*, p. 79, cites a figure of 2 percent beyond which the net impact of population on development turns significantly negative—i.e., "acts as a brake on development." While this 2 percent figure is viewed as an approximation varying from country to country, it is notable that 1) the figure is so high, and 2) a non-linearity is entertained (i.e., at lower rates, population may not act as a significant brake on development, but can be accommodated).
6. The most interesting redirection of attention is in the *WDR 1984* which stresses the impact of population growth on the development of human capital (especially education) and the impact of technical change—". . .there is little doubt that the key to economic growth is the advance of human knowledge." The report speculated that population growth ". . . slows the accumulation of skills that encourage technological change." These are interesting hypotheses that merit close empirical assessment. Moreover, they represent a shift of attention from the traditional neoclassical concerns about saving and physical capital formation to technology and education. This is a welcome development since so little is known about the nature and determinants of technical change. See the World Bank, *WDR 1984*, p. 80.

7. See World Bank, *WDR 1984*, p. 91; Cassen, Robert, "Population and Development: A Survey," *World Development* Vol. 4 (1976) pp. 785-830; and Resources for the Future, "Feeding a Hungry World," *Resources* Vol. 76 (1984) pp. 1-20.
8. Food and Agriculture Organization of the U.N., *Land Resources for Populations of the Future* (Rome: FAO, 1980); and the World Bank, *WDR 1984*, p. 90.
9. World Bank, *WDR 1984*, p. 90.
10. World Bank, *WDR*, 1981, p. 105; World Bank, *WDR 1982*, pp. 46-52; World Bank, *WDR 1984*, pp. 91-94; Cassen, "Population and Development," p. 908; and Resources for the Future, "Feeding a Hungry World."
11. *Ibid.*
12. For a penetrating analysis of food-balance and "entitlements," consult Sen, Amartya, *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981); also see Cassen, "Population and Development," pp. 809-810.
13. World Bank, *WDR 1984*, p. 63.
14. For a similar reassessment of the Malthusian assessment see Johnston, Bruce F. and Peter Kilby, *Agriculture and Structural Transformation* (New York: Oxford, 1975).
15. Keyfitz, Nathan, "World Resources and the World Middle Class," *Scientific American* Vol. 235 (1976) pp. 28-35.
16. On the role of markets in signaling conservation, V. Kerry Smith and John V. Krutilla conclude: ". . . private markets (with complete information) are not likely to lead to excessively rapid depletion of natural resources," and ". . . departures from either competitive markets or noncompetitive market structures that would lead to efficient intertemporal resource-use profiles are likely to favor excess conservation rather than too-rapid depletion." See Smith, V. Kerry and John V. Krutilla, "Economic Growth, Resource Availability, and Environmental Quality," *American Economic Review* Vol. 74 (1984) pp. 226-230. On the possibilities of conservation, the World Bank, *WDR 1984*, concludes: "Progress made so far in conservation has only scratched the surface of what is technologically possible and likely to be economically attractive at higher energy prices." See the World Bank, *WDR 1984*, p. 28. Reviews of projections of nonfuel resources appear to reveal substantial supplies relative to demands well into the next century. See the World Resources Institute "World Resource Projections: A Review of Current Projections of World Resources," *The Global Possible: Resources, Development and the New Century* (Washington, D.C.: World Resources Institute, 1984). For a pessimistic assessment about resources in relation to population, see Council on Environmental Quality, U.S. Department of State, *The Global 2000 Report to the President of the U.S.: Entering the 21st Century* (Washington, D.C.: U.S. Government Printing Office, 1981). For an optimistic assessment, see Simon, Julian, and Herman Kahn, *The Resourceful Earth: A Response to Global 2000* (New York: Basil Blackwell, 1984).
17. Simon, Julian, *The Ultimate Resource* (Princeton: Princeton University Press, 1981).
18. World Bank, *WDR 1984*, p. 80.
19. *Ibid.*
20. Since energy is taken by many to be the most important natural resource, the key issue is how energy is combined with capital and labor in production. This is an empirical issue about which there presently exists great uncertainty. If energy and capital are complements, then rising energy prices could diminish capital formation and growth. A preliminary consensus in the literature shows that energy and capital are complements in the short run, and substitutes in the long run. See Griffin, James F., "The Energy-Capital Complementary Controversy: A Progress Report on Reconciliation Attempts," in E. Berndt and B.C. Field (eds.), *Modeling and Measuring Natural Resource Substitution* (Cambridge, Mass.: MIT Press, 1981); and Smith and Krutilla, "Economic Growth."
21. See Mason, Andrew, "National Saving Rates and Population Growth: A New Model and New Evidence," unpublished paper, the East-West Population Institute, Honolulu, Hawaii, 1984. In a review of a sizable number of studies, Mason concludes that ". . . there is very little reliable evidence on the relationship between the number of children and household savings based on the analysis of household survey data for developing countries" (p. 6). From a model he developed, Mason concludes that the impact of a population with a disproportionate number of children is likely to be felt only in rather robust, fast-growing economies. This excludes much of South Asia and sub-Saharan Africa, and is most applicable to parts of the Middle East, Asia and the Pacific. Ironically, the benefits (increase in savings) of low population growth are least in countries with sluggish economies. See also, Bilsborrow, Richard E., "Age Distribution and Savings Rates in Less Developed Countries," *Economic Development and Cultural Change* Vol. 28 (1979) pp. 23-44; Cassen, Robert, *India: Population, Economy and Society* (New York: Holmes and Meier, 1978); and Kelley, A.C., "Population Growth, the Dependency Rate, and the Pace of Economic Development," *Population Studies* Vol. 27 (1973) pp. 406-420; and Kelley, A.C., "Interactions of Economic and Demographic Household Behavior," in Richard A. Easterlin (ed.) *Population and Economic Change in Less Developed Countries* (Chicago: University of Chicago Press, 1980).
22. World Bank, *WDR 1984*, p. 82. Several reasons are presented, including 1) the extent to which household savings is constrained by poorly developed financial markets; 2) the premise that children may be a form of savings; and 3) the fact that many poor families are too poor to save.
23. Piotrow, *World Population Crisis*, p. 15.
24. Kelley, A.C., "Economic Change and the Size of the Government Sector," *Southern Economic Journal* Vol. 43 No. 2 (1976) pp. 1056-1066.
25. Kelley, "Economic Change and the Size of the Government Sector"; Kelley, A.C., "The Role of Population in Models of Economic Growth," *American Economic Review* Vol. 64 (1974) pp. 39-44; and Kelley, A.C., "Demographic Impacts on Demand Patterns in the Low-Income Setting," *Economic Development and Cultural Change* Vol. 30 (1981) pp. 1-16.

26 Cassen argues that focusing on the direct impact of population growth on investment (e.g., "unproductive" education versus "productive" factories) has probably missed the most relevant impact of population on investment. In the context of Indian experience, he highlights the increased capital and foreign exchange costs required to maintain or increase agricultural productivity in the face of population pressures. See Cassen, *India*, pp. 226-236. I would note that computable general equilibrium modeling (see next section) can be used to assess the impact of the *indirect effects* of population growth on investment.

27 The data presented are often not directly relevant, or are circumstantial. For example, calculations are made of the cost of accommodating larger school enrollments engendered by high fertility rates. Next a "counterfactual" is posed of lower fertility rates, showing "educational savings." Speculations are then offered on how such savings "could have been" used in various productive ways. The relevant issue is whether such savings "would have been" used in productive ways. The *WDR 1984* provides examples of this counterfactual analysis. For Egypt, "less rapidly growing enrollment produces considerable saving; these *can be used* to improve school quality" and "with the money saved by lower fertility, the Malawi government *could afford* to enroll . . ." (Emphasis mine.) See World Bank, *WDR 1984*, p. 85. Of course, the savings could also be used for other things, many of which are "unproductive." The relevant data would instead demonstrate how a group of countries do in fact reallocate the resources, public and/or private, in response to higher population growth rates.

28 Cassen, *India*, pp. 225-226.

29 Kelley, A.C., and J.G. Williamson, *Lessons from Japanese Development: An Analytical Economic History* (Chicago: University of Chicago Press, 1974).

30 McNicoll, G., "Consequences of Rapid Population Growth: Overview and Assessment," *Population and Development Review* Vol. 10 (1984) pp. 177-240.

31 With respect to the TEMPO models, B. Arthur and G. McNicoll note that "one assumption, questionable in theory, therefore governs the outcome: the result has been settled in advance, and built in" and the ". . . models were for the most part persuasion devices for fertility reduction." See Arthur, B. and G. McNicoll, "Large-scale Simulation Models in Population and Development: What Use to Planners?" *Population and Development Review*, Vol. 1 (1979) pp. 151-165. Warren Sanderson agrees: ". . . in the TEMPO II model, expenditures on fertility control could increase per capita income even if the cost of averting an additional birth were about five or six times per capita income. This result is essentially built in . . . by assuming that population growth has no stimulating effects anywhere in the economy." See Sanderson, Warren C., *Economic-Demographic Simulation Models: A Review of their Usefulness for Policy Analysis* (Laxenburg, Austria: International Institute for Applied Systems Analysis, 1980) p. 12. Robert Solow echoes the need for feedback in his assessment of the *Limits to Growth* study: "The basic assumptions [are] that stocks of things like the world's natural resources and the waste disposal capacity of the environment are finite, that the world economy tends to consume the stock at an increasing rate, and that there are no built-in mechanisms . . . to turn off consumption gradually and in advance. You hardly need a giant computer to tell you that a system with these behavior rules is going to bounce off its ceiling and collapse to a low level." See Solow, Robert, "Is the End at Hand," *Challenge* Vol. 16 (March/April 1973) p. 43. And W. Sanderson faults the BACHUA models for insufficient economic feedback and interaction: ". . . most of the simulations . . . assume that output growth and investment are unrelated to one another and unrelated to anything else in the model." See Sanderson, "Economic-Demographic Simulation Models," p. 22.

32 Kelley, A.C., J.G. William and R.J. Cheetham, *Dualistic Economic Development: History and Theory* (Chicago: University of Chicago Press, 1972).

33 Kelley, A.C., and J.G. Williamson, *What Drives Third World City Growth? A Dynamic General Equilibrium Approach* (Princeton: University Press, 1984) and Cassen, *India*, pp. 226-236. The Kelley and Williamson model responds in part to Cassen's criticisms of economic-demographic paradigms that fail to examine the impact of population growth on investment used to produce consumer goods, the cost of overcoming diminishing returns to land, and the role of foreign investment.

34 Adelman, I. and S. Robinson, *Income Distribution Policy in Developing Countries: A Case Study of Korea* (Stanford, Calif.: Stanford University Press, 1978).

35 World Bank, *WDR 1984*, p. 90.

36 World Bank, *WDR 1984*, p. 105.

37 *Ibid.*

38 World Bank, *WDR 1984*, p. iii.

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The Elusive Exodus:
Emigration from the United States

*by Robert Warren
and Ellen Percy Kraly*

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The Elusive Exodus: Emigration from the United States is the eighth in a series of occasional papers, *Population Trends and Public Policy*, published by the Population Reference Bureau, Inc. This series is devoted to a discussion of demographic issues of concern to policymakers.

Robert Warren is a statistician with the Statistical Analysis Branch of the U.S. Immigration and Naturalization Service, Washington, D.C. The views expressed in this report are the author's and do not necessarily reflect Administration policy.

Ellen Percy Kraly is an assistant professor of demography and geography at Colgate University, Hamilton, New York.

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March 1985

Editor: Paola M. Scommegna

The Elusive Exodus: Emigration from the United States

In Summary

The waves of immigration that have swept the United States have been welcomed, decried, legislated, and regulated, but always the focus of public attention. An outgoing tide of emigration has occurred in tandem; while it has been counted during some periods, for the most part emigration has been ignored.

Piecing together data from a handful of different sources, demographers Robert Warren of the Immigration and Naturalization Service and Ellen Percy Kraly of Colgate University have assembled a statistical sketch of U.S. emigration.

Their conclusions may come as a surprise to many: Since the turn of the century the ratio of immigration to emigration has been 3-to-1. The 30 million legal immigrants the U.S. admitted between 1900 and 1980 must be balanced against 10 million emigrants who left to settle elsewhere.

It is not surprising that a number of former immigrants left disillusioned, or chose to retire in the "old country," or moved on to unexplored Canadian frontiers. More startling are the recent trends in U.S. citizen emigration that Warren and Kraly identified. Combing foreign immigration data revealed that over the past few decades U.S. citizens also are emigrating and this trend gained momentum during the 1960s and remained steady during the 1970s. Warren and Kraly report that more than 100,000 U.S. citizens are counted as immigrants to other countries each year.

Where are these U.S. citizens going? Foreign immigration data indicate that more than one-third of U.S. emigrants settled in Canada or Mexico. European countries were the second most popular destination, with the United Kingdom and West Germany receiving the most U.S. emigrants and the Netherlands, Belgium, Sweden and Norway receiving large flows in proportion to their populations. Among countries outside of North America and Europe, Japan and Australia received the most U.S. emigrants. Hong Kong received a significant number relative to its size.

Warren and Kraly stress that much more information is needed on emigration. Since the INS discontinued collecting emigration data in 1957, estimates of emigration have been used and these estimates have been low. Currently, the Census Bureau estimates emigration to total 40,000 a year. The Census Bureau's analysis of the 1980 census, however, used emigration figures of 160,000 per year during the decade of the 1970s.

To illustrate the magnitude of recent emigration trends, Warren and Kraly compared the number of non-U.S. citizen emigrants (former U.S. immigrants leaving the United States who did not become naturalized citizens) to the number of undocumented immigrants counted in the 1980 census. In the Census Bureau's evaluation of the 1980 census these two flows were of roughly the same dimension—1.2 million non-U.S. citizen emigrants vs. 1.5 million undocumented immigrants. While the accuracy of both these figures has been questioned, the comparison indicates that emigration is a significant aspect of U.S. population dynamics, given too little attention to date.

Of what use would more detailed information on emigration be? Warren and Kraly suggest several applications, including:

Immigration policy. An understanding of emigration would allow the United States to institute yearly levels of immigration based on net rather than gross immigration. A "revolving door" policy could be set up whereby extra immigrants could be admitted for non-U.S. citizen emigrants who choose to leave.

Population estimates. Agencies of the state and federal government as well as private businesses rely heavily on population estimates in their planning and budgeting. Data on emigration would enhance the accuracy of national population estimates.

To find out the "hows, whys, whos, and wheres" of U.S. emigration in an efficient and cost-effective manner, Warren and Kraly suggest adding questions on emigration to existing population surveys. Above all, they caution, data collection methods should not restrict or impede travel in any way.

Finally, say Warren and Kraly, more information on emigration has the potential to turn upside down common thought on the topic of international migration. "The facts appear to contradict the notion that everyone wants to come to the United States and no one wants to leave," they say.

The Elusive Exodus: Emigration from the United States

by Robert Warren and Ellen Percy Kraly

Members of the U.S. diplomatic community, Athens.

In a society founded on the assumption of individual freedom, the ability to leave the country unhindered is a cherished right. Persons who move out of the United States do so not only unnoticed but also unrecorded. In fact, statistics on emigration from the United States were last collected during the Eisenhower administration. Despite the deficiencies in the data, enough information is available to determine that during the 20th century the United States gained about 30 million immigrants and lost approximately 10 million people to emigration. Currently, more than 150,000 people, mostly former immigrants, leave each year.

A close look at emigration trends alters our perception of the impact immigration has on U.S. society. The facts appear to contradict the notion that everyone wants to move to the United States but no one wants to leave. It is not surprising that some portion of the immigrant population eventually departs. A relatively new phenomenon appears to have gained momentum over the past few decades: U.S. citizens also are emigrating in increasing numbers.

Statistics on emigration trends will allow the United States to develop a more flexible and responsive immigration policy. Emigration data also are needed to compute accurate U.S. population estimates and projections, used in both business planning and federal budgeting and policy analysis.

Collecting timely information about emigration poses unique problems. The only official monitoring of emigration by the U.S. Immigration and Naturalization Service (INS) was discontinued in 1957 because the data were considered to underestimate permanent departures. The U.S. Bureau of the Census

Business run by a U.S. citizen, Panama City, 1955.

This U.S. citizen emigrated to Australia with her Australian husband, 1977.

abandoned the census of U.S. citizens living abroad for similar reasons. The patterns of emigration described in this report have been pieced together from a variety of data sources, including *immigration* statistics collected by other countries. The data sources and demographic techniques are discussed on page 16. In this report, "emigrant" refers exclusively to legal U.S. residents departing the United States. The term "non-U.S. citizen" refers to immigrants from other nations residing legally in the United States.

This review and compilation of emigration statistics demonstrates that emigration from the United States is a significant demographic phenomenon. These trends have implications for several areas of U.S. public policy, notably national population dynamics and projected growth, and U.S. immigration policy. The results presented here also demonstrate that we need to know more. Mechanisms should be developed within the federal statistical system to provide policymakers with reliable and comprehensive information about U.S. emigration.

The Relationship Between Immigration and Emigration

The level of immigration to the United States has fluctuated widely during this century due to wars, changing economic conditions, and the limits on immigration imposed in the mid-1920s.[1] Although emigration was not measured completely during all periods, a substantial counterflow has accompanied immigration, regardless of historical circumstances.

Historical trends. The 1908 Report of the Commissioner General of Immigration stated that "the rapidity of communication and the cheapness of passenger traffic in recent years has facilitated the migration, especially of the laboring classes, from one country to another." The report also observed that "the facility and cheapness of communication, especially in ocean travel, has likewise contributed to emigration from the United States."[2]

Statistics on the return migration of former immigrants were first collected in 1908 after immigration reached an all-time peak of 1.3 million in 1907. Section 12 of the Immigration Act of 1907 required that data on the number of non-U.S. citizens leaving the United States be collected in order to monitor the net increase in population due to immigration.

The wide assortment of data sources needed to construct a historical review of U.S. emigration often excludes or underestimates U.S. citizen emigration. The estimates of emigration shown in Table 1 and Figure 1 (pages 4 and 5) are based on INS statistics and estimates of emigration derived through analysis of both U.S. census counts and INS data (see Methods section, page 16).[3] Statistics on U.S. citizen emigration were collected by the INS between 1918 and 1950. Some of the U.S. citizens who emigrated during that period were naturalized citizens and many of the remainder were probably U.S.-born children of departing former immigrants.

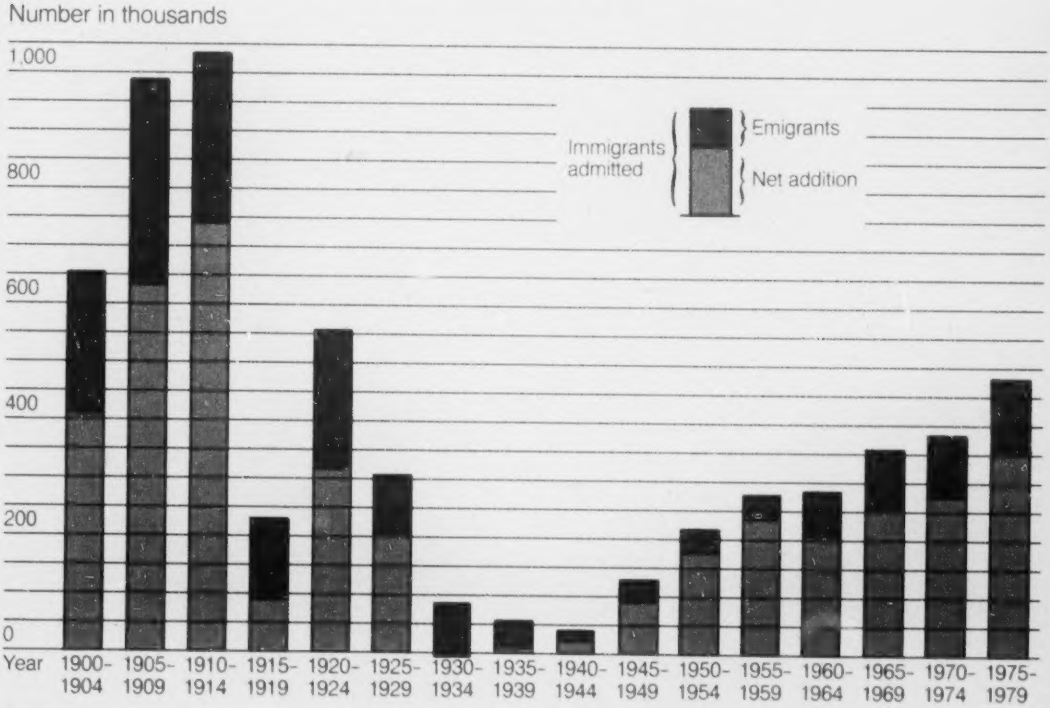
Evidence indicates that hundreds of thousands of U.S. citizens emigrated during the past few decades, but the figures are not precise enough to be included in this comparison. (They are discussed, however, later in this report.) Therefore, the figures shown in Table 1 tend to underestimate emigration, particularly for the period since 1960.

Figure 1 illustrates the fluctuations in immigration levels and the relationship between immigration and emigration during this century. The bars represent *annual averages* for five-year periods. Although more the 13 million immigrants arrived between 1900 and World War I, the *net* addition to the U.S. population was approximately 9 million because more than 4 million non-U.S. citizens returned to Europe during that period. Most of those who emigrated lived in the United States for only a short period; about three-quarters of the emigrants departed less than five years after their arrival.

During World War I, net migration came to a virtual standstill. In 1918 and 1919, the number of emigrants exceeded the number of immigrants for possibly the first time in U.S. history. After World War I, both immigration and emigration increased sharply but remained below prewar levels. Large-scale immigration resumed in the early 1920s, followed by severe numerical restrictions on immigration from countries outside the Western Hemisphere. The restrictions held net immigration to about 200,000 annually until the Depression began. Figure 1 also illustrates the impact of the Depression and World War II on immigration and emigration. Immigration fell to its lowest level since the Civil War, averaging less than 50,000 each year between 1931 and 1945. Emigration was higher than immigration in each year between 1932 and 1936.

After World War II, immigration gradually increased, but levels of immigration and emigration were restrained by the economic effects of the war thoughout Europe. Since 1965, immigration levels have increased more rapidly due to changes in immigration laws and the large flows of refugees from Cuba, Southeast Asia and other areas. The annual level of non-U.S. citizen *emigration* also appears to have increased steadily during the past few decades, passing the 100,000 level in the late 1960s.

Figure 1
Annual average number of U.S. immigrants admitted, U.S. emigrants departing, and net addition to U.S. population, for five-year periods, 1900–1979



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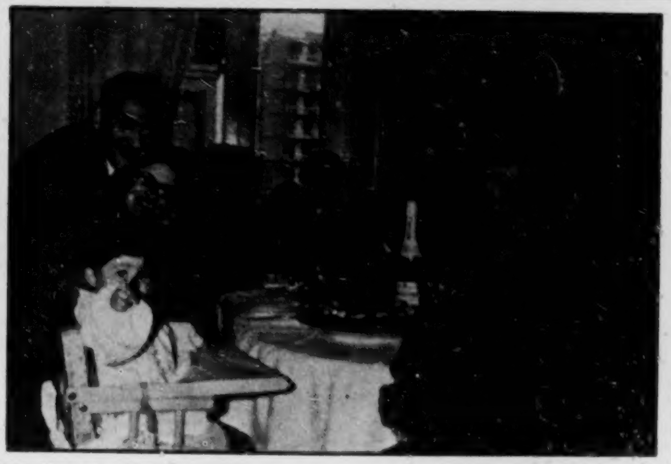


Italian family celebrates the return of their son (upper left) with his U.S. citizen wife and U.S.-born daughter, 1959.

Table 1:

Estimates of U.S. immigration, U.S. emigration and net additions to the U.S. population, 1900-1979
(Numbers in thousands)

Period	Net Addition	Immigrants	Emigration Total	Emigration Non-U.S. citizen	Emigration U.S. citizen
All periods	20,169	30,450	10,281	9,492	789
1975-1979	1,782	2,411	629	629	*
1970-1974	1,376	1,923	547	547	*
1965-1969	1,285	1,795	510	510	*
1960-1964	1,028	1,418	390	390	*
1955-1959	1,190	1,401	211	211	*
1950-1954	885	1,099	214	214	*
1945-1949	468	653	185	94	91
1940-1944	109	205	96	57	39
1935-1939	66	272	206	153	53
1930-1934	−16	427	443	336	107
1925-1929	1,009	1,520	511	390	121
1920-1924	1,601	2,775	1,174	893	281
1915-1919	458	1,173	715	618	97
1910-1914	3,733	5,175	1,442	1,442	*
1905-1909	3,154	4,947	1,793	1,793	*
1900-1904	2,041	3,256	1,215	1,215	*

*Not available

Source: ref. 1, 3

Table 2:
Estimates for the United States of legal immigration, non-U.S. citizen emigration, and recorded undocumented immigration for selected areas, 1970-1980

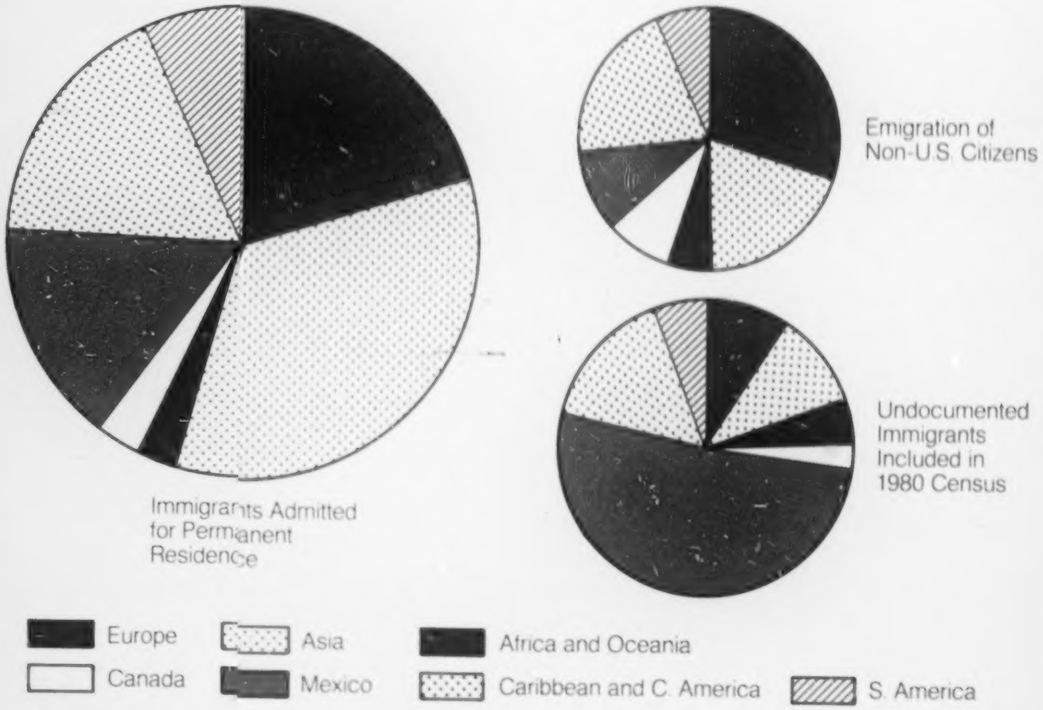
(Numbers in thousands, percentages in parentheses)

Area	Legal immigrants	Non-U.S. citizen emigrants	Undocumented immigrants counted in 1980 census
All areas	3,938 (100)	1,177 (100)	1,517 (100)
Europe	805 (20)	346 (29)	94 (6)
Asia	1,335 (34)	239 (20)	141 (9)
Africa and Oceania	121 (3)	62 (5)	67 (4)
Canada	112 (3)	97 (8)	22 (1)
Mexico	614 (16)	120 (10)	902 (59)
Caribbean and C. America	688 (17)	238 (20)	208 (14)
S. America	263 (7)	75 (6)	82 (5)

Columns add to less than 100 percent due to rounding.

Source: ref. 4

Figure 2
Comparison of selected sources of migration to and from the United States, 1970-1980



Source: ref. 4

English class for U.S. immigrants; some choose not to stay in the United States.

Recent trends. In 1984, the Census Bureau reported that the 1980 census counted 1.5 million undocumented immigrants who entered the country between 1970 and 1980.[4] Estimates of non-U.S. citizen emigration also were derived as part of that report. These Census Bureau estimates permit us to isolate the decade of the 1970s and to compare the recorded levels of legal immigration, undocumented immigration and non-U.S. citizen emigration for that period.

Table 2 and Figure 2 show the estimates for selected areas. The figures on legal immigration are based on the detailed data maintained by the INS. The figures for emigration are low because data on U.S. citizen emigration are not precise enough to be included in this comparison.

The figures for undocumented immigrants in Table 2 and Figure 2 are limited to the number included in the 1980 census, which is below the total number in the country in 1980. How far this figure is below the number of undocumented immigrants who entered the country during the 1970s is unclear. It is possible, however, that the 1980 census counted most of the undocumented immigrants *who established residence* in the United States during the 1970s and thus the count approximately reflects the number added to the U.S. population during the period.

Figure 2 shows that the estimated number of non-U.S. citizens emigrating and undocumented migrants counted in the census were roughly of the same magnitude during the 1970s, 1.2 and 1.5 million respectively. The geographic areas involved in these two types of flows differed considerably. About half of the undocumented immigrants counted in the census came from Mexico, while the destination of half of the emigrants was either Europe or Asia.

Emigrants bound for Europe, about 30 percent, were far fewer than as recently as 20 years ago when almost all U.S. emigrants settled in Europe. Since the 1965 amendments to the Immigration and Nationality Act, immigration from Asia, and consequently return migration to Asia, has increased dramatically. The number of non-U.S. citizens who emigrated to Canada from the United States was just below the number of persons immigrating to the United States from Canada. Relatively few undocumented Canadians appear to have established residence in the U.S. during the 1970s.

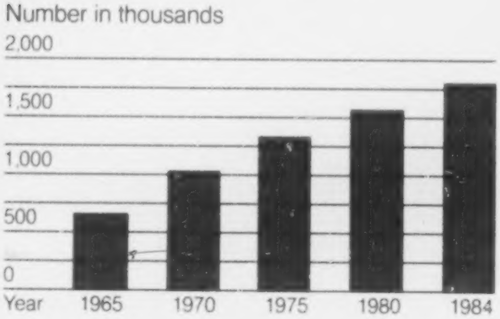
Despite the limited data, this review has shown that emigration of non-U.S. citizens has been a significant component of U.S. population dynamics. During the past few decades, emigration of U.S. citizens appears to have increased also, but the levels of permanent migration are even more difficult to assess.

Emigration of U.S. Citizens

Citizens of the United States include persons born in the United States and former immigrants who have become naturalized citizens. Consequently, to some extent, emigration patterns of U.S. citizens are related to prior patterns of immigration and naturalization in the United States. Recent patterns of U.S. citizen emigration have received very little attention. Few federal agencies need information about the departure of U.S. citizens and the sources of data that do exist often are not available in published reports.

State Department figures. The U.S. Department of State maintains figures on the number of "Americans" residing within the jurisdiction of U.S. consular

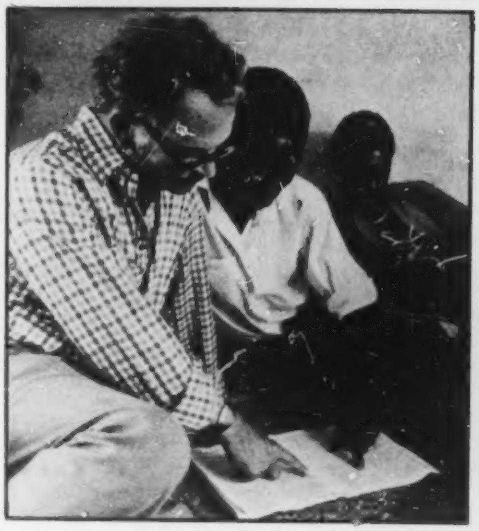
Figure 3
*U.S. State Department estimates of U.S. citizens abroad, 1965-1984**



**Does not include U.S. military personnel or their dependents.*

Source: ref. 5

U.S. teacher, Kenya.



posts. The data are the basis for planning evacuation strategies in the event of foreign crises.

In 1984, the number of U.S. citizens living abroad was estimated at 1.8 million.[5] The figure does not include U.S. military personnel or their dependents, but it does include civilian employees of the U.S. government and their dependents. Figure 3 illustrates the estimated growth in the number of U.S. citizens living abroad during the past two decades.

State Department officials emphasize that the data in Figure 3 represent a composite of estimates submitted by individual consular officials based on highly variable information sources and calculation methods. Only about half the level is based on actual registration by citizens at consular posts, so the numbers could be somewhat inflated. Acccording to a State Department official:

"Many citizens register because they want our consular offices to know who and where they are, where they can be contacted in the event of an emergency at home or even an emergency that may arise where they are living. Registration also facilitates passport issuance because the registrant's citizenship has already been made a matter of record. Not all Americans bother to register. Many do not feel the need for doing so and there is no obligation to do so."[6]

State Department estimates of U.S. citizens abroad for 1983 were available for geographic areas. They indicate that about 37 percent resided in the nations of North and Central America and the Caribbean, with nearly 16 percent living in Canada and 14 percent in Mexico. An estimated 9 percent resided in Latin America. Approximately one-third (32 percent) of U.S. citizens abroad resided in Europe, with the largest groups in West Germany, the United Kingdom and Italy. Asia accounted for 16 percent of the total, with the largest concentrations in the Middle East (Saudi Arabia and Israel), the Philippines, Japan, Hong Kong and Singapore. The remaining 8 percent of U.S. citizens abroad were divided almost evenly between the countries of Africa and Oceania.

Foreign census data. It might appear that census data collected by other countries would be an excellent source of information on the U.S. population residing abroad. The counts of U.S.-born residents of a foreign country at the time of their census could simply be extracted from the data.

Unfortunately, the process is much more complex and less productive than it first appears. It requires—at a minimum—published data classified by place of birth for the national population. Such tabulations, however, exclude former U.S. immigrants returning to their country of birth. Also, to form a complete picture of U.S. citizen emigration these data would have to be compiled for all countries of the world. To estimate trends in emigration, data would be needed for consecutive censuses.

Most countries, particularly less developed countries, do not include an appropriate tabulation in the published volumes. Much of the data available from primary census sources refer to censuses conducted in the early 1960s; in late 1984, many countries had not yet completed processing the data from the 1980 round of censuses.

Available information from foreign censuses tentatively supports the State Department figures. Japan and Australia are among the countries with increasing numbers of U.S. residents. U.S. citizens living in Australia increased from 17,000 in 1966 to 30,000 in 1971; the 1976 Australian census identifies 81,000 persons born in "America," a term that illustrates the ambiguity of classifications in published census tabulations.[7] The U.S.-born population counted in the censuses of Mexico increased from 97,000 in 1970 to 139,000 in 1980.[8]

To date, the best single source of comparative census data is the 1977 volume of the United Nations *Demographic Yearbook*. This source is limited, however, because the compilation presents counts of the U.S.-born population from the censuses of only 25 countries. A forthcoming volume of the *Demographic Yearbook* will update these figures.

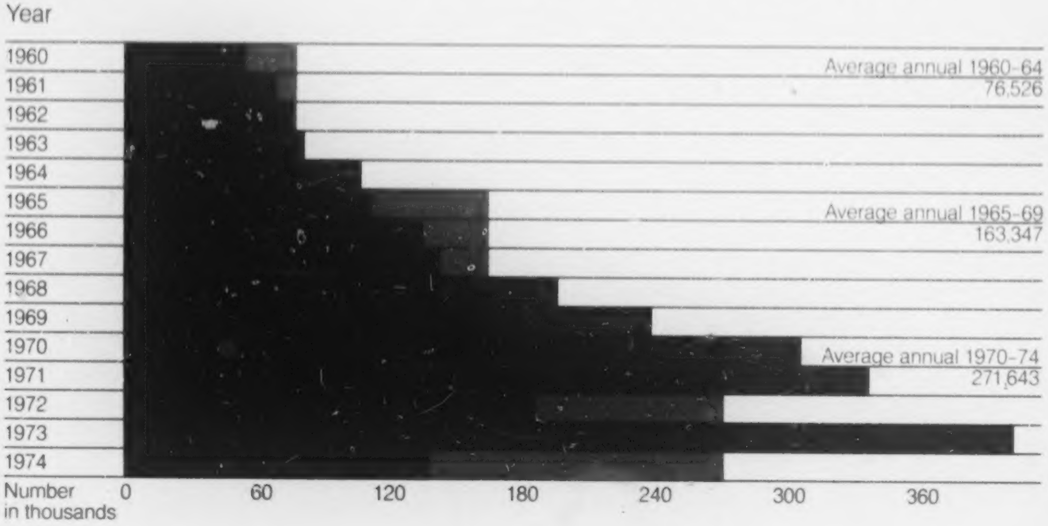
Other countries' immigration statistics. Table 29 of the U.N.'s 1977 *Demographic Yearbook* contains detailed data for countries that have submitted annual data on immigration between 1958 and 1976 by country of last permanent residence. Because most countries use legal and administrative criteria such as citizenship and work premits to identify immigrants, these figures probably represent emigration of U.S. citizens rather than return migration of former-U.S. immigrants. Thus, there probably is little overlap between these figures and the data shown in Table 1, which does not include U.S. citizen emigration after 1960.

The number of persons classified as immigrants from the United States was extracted for each of the years reported by the receiving countries. There could be significant biases in the data due to different procedures used by countries to define long-term immigrants and to distinguish these immigrants from international arrivals. Those countries that classify *all* international arrivals, including tourists, as immigrants in U.N. statistics are excluded.

Figure 4 illustrates the number of U.S. citizens reported as permanent migrants in foreign immigration statistics each year between 1960 and 1974. The unevenness of the figures reflects changes in the number of countries reporting data in each year as well as changes in statistical procedures. The green blocks "smooth" this effect by indicating the average annual level of emigration from the U.S. for three five-year intervals.

Even allowing for lack of comparability in the data and later return movement to the United States, the level of emigration from the U.S. is substantial, exceeding 100,000 each year since 1964. Some portion of the flow could be overestimated because countries define and measure immigration differenlty. On the other hand, it is equally plausible that the levels shown in Figure 4 underrepresent current trends because not all countries collected data and because data refer to the previous decade.

Figure 4
Reported immigration to selected countries from the United States, 1960-1974



Source: ref. 7

Figure 5 illustrates average annual emigration by continent for the same time periods. Emigration to Europe may have leveled off during recent years, although it is difficult to tell because data are available for fewer countries after 1974. The increase in emigration to North America reflects flows from the U.S. reported by Mexico. These statistics need to be carefully evaluated. The U.S.-born population in the 1980 census of Mexico was only 42,000 higher than the 1970 census. This indicates that the number of U.S. immigrants that Mexico reported to the U.N. Statistical Office included both permanent and temporary migrants.

The trends in emigration and shifts in destination of emigrants shown in Figure 5 reflect changes in the number of countries submitting data to the U.N. Statistical Office. Between 1960 and 1974, the total number of countries of destination included in the U.N. statistics varied between 29 (1960) and 46 (1968). In order to control for this problem, Table 3 presents immigration statistics for the 18 countries that reported regularly during the 1960 to 1976 period. Approximately 80 percent of U.S. residents reported as immigrants to other countries were bound for these countries. The annual figures used to construct Table 3 indicate that immigration of U.S. citizens to these countries increased during the 1960s and remained stable during the 1970s. The large number of U.S. citizens recorded in these international migration statistics form a strong basis for arguing for more research on the process of emigration.

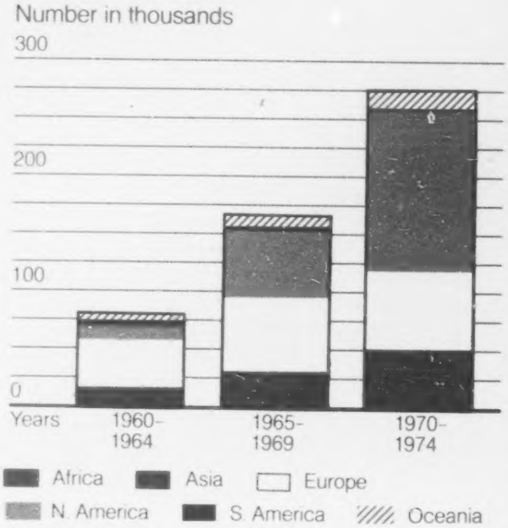
Reasons for emigration. While we do not know the exact means by which countries identify immigrants and whether for analytic purposes we can consider all those persons reflected in the U.N. data as immigrants, the data do reveal high levels of emigration from the U.S. and geographic patterns of emigration that have changed during the past few decades.

The statistical evidence clearly needs further critical attention; the underlying movtivation for this large outflow of U.S. citizens also deserves study. A recent *New York Times* article described the community of business men and women living and working in London:

"Most of the 40,000 to 50,000 United States business men and women living here will go home, three, four or five years from now—back to the land of efficient telephones, relatively docile trade unions and cold beer.

"But there are other Americans who settle into London more or less permanently. Some stay because they like the city's ambiance, its civility, its sophistication, its rich social and cultural life. Some remain because they find exceptional opportunities there. They tend to lead thoroughly British lives: their employees and most of their friends are British. And they look down a little, although they wouldn't admit it, on their compatriots who spend the bulk of their time in Britain surrounded by Americans at work and play."[9]

Figure 5
Average annual immigration to world regions from the United States, 1960-1974



Source: ref. 7

A variety of reasons for expatriation are suggested here, and many more questions are raised: How permanent is migration abroad? Are U.S. citizens rejecting aspects of life in the United States or being attracted to specific lifestyles abroad? Does working abroad reflect a stage in the career patterns among corporate executives?

We have a sense of where U.S. residents are going and some evidence that the pace of departure is increasing, but the statistical foundation is incomplete. At this time, we can only speculate on such basic demographic measures as length of stay and purpose of migration.

Public Policy and Statistical Implications

This review of emigration from the United States, despite the limited data, indicates that immigration is accompanied by a substantial counterflow and that the number of U.S.-born persons living abroad has increased sharply in recent decades. What does this

Table 3:

Average annual immigration to selected countries from the United States, 1960-1976

	Average annual immigration from the United States[1]				
Country of destination	Total years reported	1960 to 1976	1970 to 1974	1965 to 1969	1960 to 1964
All countries		180,200	281,000	151,700	66,100
Argentina	14	400	600	300	300
Australia	15	8,500	12,800	8,500	4,400
Belgium	16	3,100	4,300	3,200	1,700
Brazil	13	1,000	900	1,100	1,100
Canada	11	21,900	24,600	19,900	*
France	14	900	1,400	900	400
Germany	15	24,800	27,800	26,400	21,600
Hong Kong	12	2,900	3,400	2,000	*
Italy	17	2,700	5,400	1,400	300
Japan	17	17,200	23,400	15,100	12,100
Kenya	17	500	400	800	200
Mexico	13	64,600	142,000	40,600	17,300
Netherlands	13	3,400	3,800	3,100	*
New Zealand	15	1,400	2,300	1,300	1,000
Nigeria	13	1,400	1,700	1,100	1,300
Norway	17	2,900	3,200	2,800	2,600
Sweden	17	1,700	1,700	1,600	1,800
United Kingdom	12	20,900	21,300	21,500	*

*Data are available for fewer than 3 years of the 5-year period

[1] Averages are based on the number of years for which data are reported

Source: ref. 7

movement mean to our society and how would more complete and detailed information be useful?

Immigration policy. Recognizing and measuring the emigration of former U.S. immigrants would allow U.S. immigration policy to become more flexible and responsive to changing circumstances. Since numerical limitations were first introduced in the 1920s, the annual level of admissions has been based on the concept of *gross* rather than *net* immigration. That is, annual figures were set as the maximum number allowable during the year rather than as the net addition to the U.S. population of immigrants minus emigrants. Measuring or estimating emigration each year would make it possible to change to a concept of net immigration.

This raises a variety of policy alternatives. The annual number of non-U.S. citizen emigrants, for example, could be added to a pool of visas that could grow or shrink from year to year depending on the level of emigration and the reuse of the numbers. It would be possible to create such a pool of visas and still keep the 270,000 person limit set by the Immigration and Nationality Act. The Administration, after consulting Congress, could specify the uses of these visas each year. Priority might be given to emigrants who want to re-establish residence in the United States.

The remaining numbers could be set aside for emergency situations such as the Cubans who arrived in the 1980 Mariel boatlift and the many thousands of Salvadorans who have fled the violence of their country's civil war.

The numbers also could be used to speed up the reunification of the families of immigrants already in the United States. Immediate relatives (spouses, minor children and parents) of legal immigrants from

Table 4:
Estimated components of the U.S. resident population change, 1970-1980

1970 Census count	203,301,000
Change, 1970 to 1980:	
Births adjusted for underregistration	+33,543,000
Deaths occurring in the United States	-19,324,000
Legal immigrants, refugees and parolees	+4,370,000
Emigration of legal U.S. residents	-1,578,000
Net addition of undocumented immigrants entering 1970-1980	+1,517,000
Other*	+4,716,000
Net change	+23,244,000
1980 Census count	226,545,000

*Includes change in coverage of the censuses, net movement of Armed Forces and civilian citizens to and from the United States, errors in the estimated components of change, and a few small categories such as death occurring to Armed Forces overseas and net migration between the United States and Puerto Rico.

Source: ref. 11

Children of U.S. citizens residing in Brazil.

some countries must wait years to obtain visas to join family members in the United States. In some cases, the long wait probably leads to unauthorized immigration. In January 1984, the number of immediate relatives waiting to join legal immigrants in the U.S. stood at more than a quarter million, including 83,000 from Mexico alone.[10]

U.S. population estimates. Better information on emigration also is important for the Census Bureau's estimates of the U.S. population between censuses. Population estimates and projections are used extensively by federal agencies and private businesses.

The formula for distributing billions of dollars each year in federal funds to state governments is also based on these population estimates. To the extent that emigration does not occur in proportion to the population of each state, the failure to allow adequately for emigration can distort the population estimates used to distribute federal funds.

The components of change of the U.S. population between 1970 and 1980 are shown in Table 4. These figures are based on analyses conducted at the Census Bureau as part of the 1980 census evaluation.[10] The population grew by more than 23 million during the decade. Births and deaths played the major role. Legal admission of immigrants and refugees during the decade was estimated at 4.4 million.

For their evaluation of the 1980 census count, the Census Bureau estimated that emigration for the decade totaled 1.6 million. (Their figure is slightly *higher* than our estimate of 1.2 million because a small estimate of U.S. citizen emigration is included.) The Census Bureau's estimate of 1.6 million emigrants implies an average of 160,000 emigrants per year. Although the Census Bureau used this level of emigration in the figures used to evaluate the 1980 census, they continue to use the much lower figure of 40,000 emigrants per year in computing the population estimates for the period since the 1980 census. The low estimate of emigration is a holdover from 1957, when the INS stopped collecting emigration data.

The Census Bureau's population estimates made since the 1980 census are based on reliable and timely information on births, deaths and legal immigration available through the vital registration system and the INS. Sources of data for emigration are much less reliable and undocumented immigrants are not included in the population estimates.

Since *no* information is available on emigration and undocumented immigration for the period since 1980, these two relatively small components of change account for most of the error in the current population estimates. As we have seen, non-U.S. citizen emigration alone has probably been at or above the 100,000 level each year for the past two decades. In addition, only a small allowance has been made for U.S. citizens living abroad permanently, and no estimates are available for groups such as diplomats, missionaries, and employees of multinational corporations who reside outside the United States for considerable periods. Census Bureau officials are now considering using much higher estimates of emigration in the population estimates program.

U.S. Population Projections. The lack of data on emigration also has affected the nation's population projections. Until recently, the Census Bureau used a single level of 400,000 "net" immigrants annually throughout the projection period. The term "net" was used inaccurately because only a small portion of the emigrant flow was included in the number. This overestimate of net migration and confusion of statistical concepts exaggerates the impact of immigration on future population change.

In 1977, Charles Keely of the Population Council and Ellen Kraly replicated the Census Bureau's population projections to determine the effect of using a more appropriate level of emigration in the projection model.[11] As expected, when higher levels of emigration were incorporated, the pace of population growth during the projection period was slowed compared with the Census Bureau's projections.

Simply projecting different fixed levels of immigration and emigration, however, does not address a more fundamental shortcoming in emigration figures used in national population projections. The problem is that emigration should not be projected at a constant level; it should be computed independently for each period, as a function of the population *at risk of emigrating.*

We can demonstrate the significance of this point using projected immigration and emigration of the foreign-born population. In this illustration we assume a fixed level of future immigration and constant rates of emigration. If the level of future immigration selected for the projections produces a growing foreign-born population, then the level of emigration also will be growing, thus reducing the level of net immigration. In the Census Bureau's projections and in other illustrative "high" projections of immigration, net immigration is held constant each year, regardless of changes in the size of the foreign-born population. This tends to exaggerate the impact of immigration on future population growth by progressively underestimating the level of emigration.

During the early 1970s, the media and public uncritically accepted speculation about the growth of the U.S. undocumented population. Reports of many hundreds of thousands of persons entering the U.S. illegally each year were not uncommon. The implicit (and often explicit) assumption was that all of the undocumented inflow was being added to the population each year. The actual growth of the population would be well below the additions for a single year if emigration were taken into account. An undocumented population of 2 million, for example, would need only a 10 percent emigration rate to offset the addition of 200,000 undocumented immigrants during a year.

Domestic policy implications. The absence of information concerning emigration affects the administration of a range of domestic programs. The distribution of hundreds of thousands of dollars in Social Security checks to beneficiaries residing abroad each month is an example of the need for an understanding of U.S. citizen and non-U.S. citizen emigration. When payments first began in 1940, the 100 recipients abroad received a total of $12,000. By 1981, the figures had grown to 313,000 recipients abroad and nearly $1 billion in payments for that year.[13] (This figure does not include recipients who live abroad but have their Social Security checks deposited in U.S. banks.)

Congress often has expressed concern about payments to non-U.S citizens who work in the United States only long enough to become eligible for benefits and then return home to collect them for themselves and their families. In 1956, some restrictions were placed on beneficiaries abroad, but the law permitted so many exceptions that the changes had little effect. Recently, bills have been introduced to cut back future payments to non-U.S. citizens and eliminate some payments to all persons residing abroad.

Ethical issues aside, the costs of curtailing these benefits should be assessed on the basis of empirical information about emigration and its relationship to retirement and disability. Refunding to emigrants the amount they paid into the Social Security system, for example, could be more costly than continuing their benefits after they leave the country.

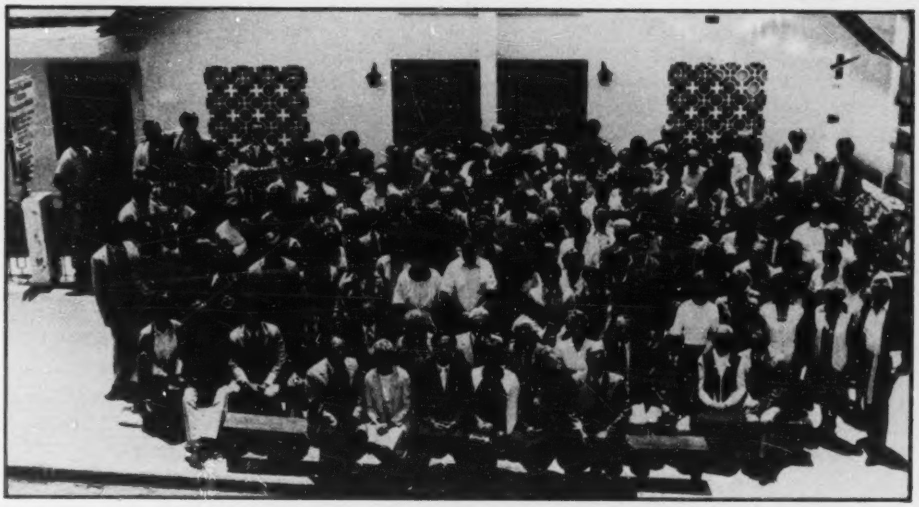
Also, an understanding of emigrants' experiences in this country and their reasons for leaving could lead to improvements in the institutions that serve newcomers. Potential problems faced by immigrants could be identified and assistance in the adjustment process could be offered.

Data Collection Methods

This statistical sketch of emigration from the United States was drawn from a variety of sources, each having inherent measurement problems. Recent data sources confirm that large numbers of people emigrate each year, but timely and complete information is lacking. To integrate emigration into policy discussions, a systematic approach to the collection of U.S. emigration data is needed.

Ideally, data on emigration should be accurate and

Missionaries in Ecuador, more than half are U.S. citizens.



timely, cover all categories of emigrants, be consistent over time, be sufficiently detailed (age, sex, state of residence, country of birth, etc.), and be measured with a minimum of unverifiable assumptions. Also, the data collection should be carried out at the lowest reasonable cost and with the least disruption of either travel or other data collection activities. Clearly, none of the sources of data used in this report approaches these standards. Alternative strategies exist, however, that could produce acceptable estimates at reasonable costs.

The two methods described briefly below could produce data useful for both policy discussion and improving U.S. population estimates. Each system of data collection has strengths and weaknesses; probably the clearest picture of emigration would be gained by undertaking both activities and using the results from each system to evaluate data from the other. The Census Bureau and the INS would be the logical agencies to oversee such data collection.

Multiplicity approach. Multiplicity, or network, sampling is probably the most promising technique for developing timely and consistent estimates of emigration from the United States. It involves adding a few questions each year to an ongoing survey, such as the Census Bureau's Current Population Survey (CPS), to collect information from relatives about family members living abroad at the time of the survey.[14]

The data collection would be inexpensive relative to other methods and would not impede the flow of travelers. Also, the procedure would cover most categories of emigrants (former U.S. immigrants, U.S. citizens, temporary and long-term, etc.), would provide an opportunity to collect information on the characteristics of emigrants, and would generate timely data for policymakers and analysts.

Inevitably, however, there are difficulties. These include the possibility of omitting individuals and entire families who have emigrated and the likelihood that the survey will be too small to generate sufficiently detailed estimates, particularly at the state level.

Some of these problems can be overcome by comparing the results with other existing data and making appropriate adjustments. Accurate data are available for some federally-affiliated groups outside the country such as the Armed Forces, civilian employees of the federal government, and dependents of both groups. Data collected in other ways, such as the one described below, could serve to supplement and verify the emigration data collected using the multiplicity approach.

The use of this technique for measuring emigration is still in the developmental stage. It was tested in the Dominican Republic in 1979 using questions suggested by a working group on methodology of the International Union for the Scientific Study of Population.[15] In Mexico, a similar approach was used in 1977 to estimate the number of Mexican-born persons residing in the United States.[16] U.S. Census Bureau officials have proposed attaching questions to the CPS for one month to test the methodology and to determine whether current estimates of emigration can be made. The project should be given high priority.

International Passenger Survey. A survey of passengers departing the United States by air and sea could provide statistics on emigration if the sampling procedure were well designed and the data collection carefully monitored. Such surveys have been used in other countries, notably the United Kingdom.

The U.S. Travel and Tourism Administration (USTTA) conducts an in-flight survey of international travelers leaving the U.S. to collect market research data, primarly for use by the tourism industry.[17] The survey's objectives could be broadened to collect emigration data since, in theory, it covers all passengers departing by air. The questionnaire used in the survey already generates demographic data on place of origin and destination, purpose of trip, age, sex, income and citizenship. The form could be revised to include additional migration-related items such as intended length of stay, occupation, and residence.

Using a passenger survey to collect information on emigration has both advantages and disadvantages. On the positive side, the statistical mechanism already exists for such a survey, all categories of emigrants would be covered, timely data could be produced, and the level of detail available could be determined by the sample size. On the other hand, it would be difficult to expand the scope of the survey to make adequate estimates of emigration across U.S. land borders, primarly because of the sheer volume of border traffic.

Also, the present USTTA survey has a low response rate that could seriously bias the data produced. These problems are not insurmountable, but a major effort would be required before adequate estimates could be produced.

In Conclusion

Despite the lack of precise statistics, we know emigration has accompanied immigration throughout the 20th century and that the phenomenon has gained momentum in recent years. Between 1900 and 1980 more than 30 million immigrants were admitted for residence in this country; approximately 10 million (mainly former immigrants and their children) emigrated during the same period. Although current figures are not available, estimates made for the 1970s indicate that non-U.S. citizen emigration exceeded 100,000 annually and that U.S. citizen emigration may have increased to roughly the same level.

After reviewing the elusive and often incomplete data on emigration from the U.S., what conclusions can we reach? First, we should recognize that emigration is a signficant demographic phenomenon with important consequences for various sectors of public policy. Second, we should get on with the task of measuring outward movement from the United States in order to raise the quality of our national and local population estimates, to develop a statistical foundation for research and policy analysis, and to broaden our perspective on international migration.

Footnotes

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Definitions and Methods

The term emigration used in this report refers to persons changing their usual residence from the United States to other countries (i.e., long-term migrants rather than visitors, tourists, students or others departing temporarily). This definition is theoretically straightforward, but defining and measuring emigration accurately can be quite complex. Some persons leave the United States with the intention of residing abroad, but later return to the United States. Others go to their country of birth for a short visit, and decide not to return to the United States. Many U.S. residents work abroad for much of the year. Our intention was to include only those estimates that reflect relatively long-term movement of U.S. residents from the United States.

Three methods were used to derive the data in this report: statistics collected upon departure; estimates derived through analysis of demographic data; and estimates of the number of U.S. citizens arriving in or residing in other countries. Detailed discussions of data sources and methodology are available in the references on the previous page; here we summarize the methods and give a brief assessment of potential biases in the data.

Emigration statistics, 1900 to 1949. The emigration statistics for 1908 to 1949 (Table 1 and Figure 1) were collected annually by the Immigration and Naturalization Service (INS) for non-U.S. citizens during the entire period and for U.S. citizens between 1918 and 1950. Estimates for 1900 to 1907 were made by the INS (reference 3). The emigration statistics would be too low if the INS failed to record all departures or if persons who intended to depart for a brief period failed to return to the United States. The statistics overestimate net migration to the extent that "permanent" emigrants returned to the United States after only a brief stay abroad.

Emigration of non-U.S. citizens, 1950 to 1979. The figures for 1950 to 1959 (Table 1 and Figure 1) were derived using annual INS statistics for 1950 to 1957 and estimates of total emigration for the decade derived from Census Bureau and INS statistics on the foreign-born population (reference 3).

The figures for 1960 to 1979 were calculated using INS annual registration data and estimates of the components of non-U.S. citizen population change. We can illustrate the methodology used with an approximate calculation for non-U.S. citizen emigration for the 1960 to 1970 period. The components of change for this population can be represented as:

(1) $P_{70} = P_{60} + I_{60\text{-}70} - N_{60\text{-}70} - D_{60\text{-}70} - E_{60\text{-}70}$
where,

P_{60} and P_{70} are the non-U.S. citizen population in January 1960 and 1970 respectively;

$I_{60\text{-}70}$ is the number of immigrants admitted for permanent residence between 1960 and 1970;

$N_{60\text{-}70}$ is the number of non-U.S. citizens naturalized between 1960 and 1970;

$D_{60\text{-}70}$ is the number of deaths among non-U.S. citizens between 1960 and 1970; and

$E_{60\text{-}70}$ is the number of non-U.S. citizen emigrants between 1960 and 1970.

From equation (1), equation (2) below can be arranged:

(2) $E_{60\text{-}70} = P_{60} - P_{70} + I_{60\text{-}70} - N_{60\text{-}70} - D_{60\text{-}70}$

Published figures are available for P_{60}, P_{70}, $I_{60\text{-}70}$ and $N_{60\text{-}70}$. $D_{60\text{-}70}$ was estimated using a crude death rate of 10.4 per 1,000. The crude death rate was derived from 1970 census data for non-U.S. citizens by age, sex and country of origin and U.S. mortality rates.

For the 1960-1970 period the figures (in thousands) for equation (2) are:

$$E_{60\text{-}70} = 2{,}943 - 3{,}815 + 3{,}268 - 1{,}125 - 351$$
$$E_{60\text{-}70} = 920$$

This estimate is very close to the figure of 900,000 for 1960 to 1970 shown in Table 1 and Figure 1.

The data for P_{60} and P_{70} are from INS registration for 1960 and 1970. The accuracy of estimated emigration can be affected by changes in the completeness of registration. If coverage improved between 1960 and 1970, emigration would be underestimated; if coverage declined, emigration would be overestimated. While we have no direct information about the relative completeness of registration in 1970 compared to 1960, there is evidence that the 1970 INS registration was reasonably complete. In January 1970 about 3.8 million resident non-U.S. citizens registered with INS, which was above the comparable 1970 census figure of about 3.5 million. The census figure is too low because hundreds of thousands of foreign-born persons erroneously reported themselves as U.S. citizens. Nonetheless, the INS and census figures were at roughly the same level in 1970. Thus, it is unlikely that a serious decline in INS registration between 1960 and 1970 could have accounted for the estimate of emigration during the period.

The estimate of non-U.S. citizen emigration for the 1960-1970 period is supported by information from a separate source. Based on an analysis of the 1960 and 1970 census counts of the foreign-born population, Robert Warren and Jennifer Marks Peck estimated *foreign-born* emigration at about 1.1 million between the 1960 and 1970 censuses.[18]

Emigration of U.S. citizens. The estimates of U.S. citizens moving abroad during the past few decades are described in references 5 and 7. The data on immigration to other countries from the United States are minimum figures because not all countries are included. On the other hand, the net effect of citizen emigration from the U.S. is overstated because no information was available for subsequent return movement to the United States. Estimates of U.S. citizen departures were not include in Table 1 or Figure 1 for the period after 1960 because acceptable estimates of net movement of U.S. citizens could not be made.

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Who Cares?
Demographic Trends Challenge Family Care for the Elderly

by Alice T. Day

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Who Cares? Demographic Trends Challenge Family Care for the Elderly is the ninth in a series of occasional papers, Population Trends and Public Policy, published by the Population Reference Bureau, Inc. This series is devoted to a discussion of demographic issues of concern to policymakers.

Alice T. Day is 1984-1985 Andrew W. Mellon Foundation Visiting Scholar at the Population Reference Bureau.

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Who Cares? Demographic Trends Challenge Family Care for the Elderly

In Summary

Demographic trends are jeopardizing the future of family care for the elderly and policies that ease the caregiving burden are needed to fill the gap, says sociologist Alice T. Day. In this issue of *Population Trends and Public Policy*, Day examines the relationship between the elderly and their caregivers and the social changes that are reshaping family roles and altering the nature of aging in the United States.

Families—not government or agency programs—provide the bulk of personal care for elderly Americans, between 80 and 90 percent. In 1985 an estimated 1.4 million elderly Americans lived in nursing homes and another 5.2 million lived in the community with disabilities that left them in need of help with day to day tasks such as food preparation, dressing, and bathing. Eighty percent of care for the disabled elderly living in the community comes from family members—mainly wives and daughters.

Yet trends in life expectancy, the age make-up of the population, women's labor force participation, and delayed childbearing will put serious pressure on families' ability to provide care in coming years.

More Americans are living past their 85th birthday, making the 85+ age group the fastest growing segment of the U.S. population. This age group is most likely to develop long-term illnesses that leave them impaired in some way and in need of home care. The number of disabled elderly Americans is expected to more than double between 1985 and 2020.

At the same time the proportion of offspring to elderly over 85 is shrinking and is expected to continue to shrink in the 1990s. Families now stand a greater chance of having a handicapped elderly relative to support than ever before. The proportion of men 65 and older with one or more surviving parents is expected to increase four-fold between 1975 and 2015, a development that could substantially alter the retirement plans of future retirees.

Most of the caregivers are women—after a spouse, daughters are the first choice and are most often the ones to serve in the caregiving role. Yet more women today are working into their 50s and are not home to care for elderly handicapped relatives; by 1990 over 60 percent of women aged 45 to 54 are expected to be in the labor force as compared to only about 35 percent in the early 1950s. A 1976 study found that households where the woman worked were more likely to seek institutionalization as an alternative to home care.

Women today are also having their fewer children later in life, increasing the possibility that they may be faced with the competing demands of children at home, the needs of a frail parent and a job.

Many of the caregivers are themselves aging. The majority of offspring caring for a disabled elderly parent are over age 50. The average age of spouses caring for a disabled partner is 66, with more than 30 percent being over age 74.

Rising health care costs compound the demographic challenges to family care. It is estimated that unless attempts are made to control increasing medical costs and curtail cutbacks in Medicare and Medicaid, the share of the health care costs paid by the elderly themselves will increase twice as fast as their incomes. In 1984, the elderly began to use more of their income for health care than before Medicare and Medicaid were developed. According to Day, much of the additional expenses will probably fall upon families that already sustain many hidden costs including, home modifications, rented equipment, higher heating bills and the "opportunity" costs to women giving up employment to support elderly relatives needing care.

These trends are on a collision course. Their full impact may be felt gradually, but they cannot be ignored.

Although it is less costly to care for all but the most severely impaired elderly in the home, government programs and policies do little to support home care. Existing home care programs serve only a fraction of the disabled elderly and are difficult to gain access to because their authority spans the federal, state and community level. Tax credits for caregivers holding jobs allow only $2,400 to be deducted, far below the actual costs of adult day care.

Day questions attempts to shift the Medicaid costs of the institutionalized elderly onto families. The demographic characteristics of the nursing home population reveal that almost half have no adult children and a large portion are suffering from disabilities (e.g. senile dementia) that are difficult to care for at home. Says Day, "Forcing adult children and relatives to contribute a greater share of financial support assumes, contrary to all available evidence, that families do not help as much as they can or that family members (many of whom are elderly themselves) can afford the extra financial drain."

Elderly wives provide care for their infirm husbands.

Who Cares? Demographic Trends Challenge Family Care for the Elderly

by Alice T. Day

The elderly's need for home care is rising, just when social change threatens to undermine the major source of that care: family members available and willing to give their older relatives personal care at home. More Americans are living into their 80s and 90s where the risk of long-term illness requiring home care increases. At the same time, demographic trends are affecting the main caregivers: wives and daughters. The daughters of the very old are more likely than their counterparts in previous generations to be in the workforce, to have had their fewer children later in life, to be divorced and remarried; and they are themselves growing older. Elderly wives providing care for infirm husbands are now more likely than in previous years to face a decade of widowhood with no children available to care for them.

This predicament raises two questions: first, how will individual families prepare for and reconcile the interests and well-being of the older generation needing care with the interests and well-being of the younger generation primarily responsible for providing that care; and second, how will American society provide aging citizens with income security and health care in a period of diminished economic growth and competing demands for scarce resources? Demographic trends are significantly affecting both the capacity of individual families to support their older kin and the capacity of society to ensure a floor of security for its older citizens.

The elderly are an integral part of family networks.

The U.S. Elderly Today: Myths and Realities

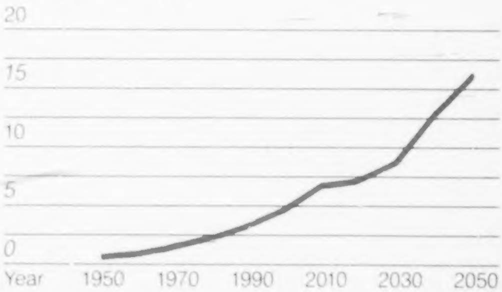
In 1985, an estimated one in every nine Americans is at least 65 years old, a substantial change from the 1-to-25 ratio with which the United States began the 20th century. By 2020, as the baby boom generation reaches 65, that ratio could jump to 1-to-6. The population age 85 and over with the highest per capita health and social service needs is growing especially rapidly, up 165 percent between 1960 and 1980. This very old population is expected to increase five-fold by the middle of the next century. (See Figure 1.)

The increasing numbers of the elderly are still such a new phenomenon that there are few historical precedents to use to anticipate the long-run consequences for families or for U.S. society as a whole. Initially, experts and the public alike assumed that the elderly—particularly those who were poor and living in large metropolitan centers—were isolated, living alone and abandoned by their families. The image of large numbers of elderly persons dumped in public institutions was raised.

Three decades of research on the family life of older people tell a somewhat different story:

First, the elderly are diverse. In terms of health, living arrangements, income security, personal and social resources (e.g., education, housing), family networks, and integration into social life, variation is as great among persons 65 and older as among younger age groups. Older Americans do not form a solid voting bloc: their interests appear to be as varied as their circumstances.

Figure 1
Actual and projected increase in U.S. population 85 and older, 1950–2050



Source: ref. 1

Male relatives are looked to for help with home maintenance.

This diversity may be seen in the health status of the elderly. Health varies significantly with age. The majority of elderly persons in their young retirement years are relatively healthy and even if they have a chronic illness are not as limited in activity as frequently assumed. Estimates based on a 1983 survey of national health suggest that the proportion of elderly in need of comprehensive personal care is relatively small. Of all non-institutionalized persons aged 65 and older, only 11 percent needed help in home management or shopping (excluding transportation), and only 9 percent needed one or more types of personal care (help with bathing, dressing, eating, or toileting).[1] However, health and mobility do decline with advancing age. By the eighth and ninth decade of life, the chances of being functionally impaired in some way and in need of health and social services increase significantly. Almost half those over 85 have one or more disabilities.[2]

Second, the majority of the elderly live at home with no more help than the ordinary services that family members of all ages need and give each other. Even among those who are very old (85 and over) or have severe disabilities, most live independently. Most live alone or with a spouse; fewer than one in five live with a relative other than a spouse. Only 5 percent are institutionalized at any one time, although 25 percent may be institutionalized at some period during their later years.

Third, the elderly are part of family networks. Most elderly parents live near at least one child; three out of four either are living with a child or within a half hour's journey of a child. Yet even in the largest metropolitan centers, once believed to be especially isolating for the aged, research finds strong family ties and patterns of support between generations.[3] Until the onset of extreme frailty, the flow of support is two-way: the elderly contribute to their families, as well as receive various kinds of assistance from them.

Fourth, the major share of social services to the elderly is provided by informal networks, particularly by close relatives. The "formal" system of government and agency programs plays a minor role in providing care for the elderly. Families provide between 80 and 90 percent of medically-related care, home nursing, personal care, household maintenance, transportation and shopping.[4] The family is the primary caregiver, even for the disabled elderly. Preliminary results of the 1982 National Long-Term Care Survey indicate that the disabled elderly population living outside of nursing homes receives about 80 percent of all care from relatives.[5] (See Table 1, page 6.)

Fifth, rarely are the elderly dumped in institutions. Institutionalization usually occurs as a last resort at the end of a period of painful decision-making. Today's families are not abandoning their kin. In fact, a large proportion of the elderly in institutions are there because they have no close relatives or suffer from disabilities (e.g., senile dementia) that are difficult to care for at home. The existence of adult children commonly deters institutionalization. One study found that while four out of five persons 65 and older had at least one surviving adult child, almost half (46 percent) of the institutionalized elderly were childless.[6] Moreover, most of the institutionalized elderly who had relatives were in close touch with them.

Research reveals that the elderly are more independent and in better health than previously realized. A majority of those 65 and ~~older—even~~ those with major limitations in their capacity for self-help—are living at home and being cared for by a family member.

Living Arrangements and Family Care

The pattern of living arrangements among older Americans has been described as the modified extended family—"modified" because older and younger generations live apart in separate households; "extended" because the elderly are in touch with both their close and distant relatives who live in other households. Not only is the modified extended family the major form of family organization found in industrial countries today, but it is the arrangement most older people say they prefer. They want to live independently as long as possible, sharing "intimacy, but at a distance."[7]

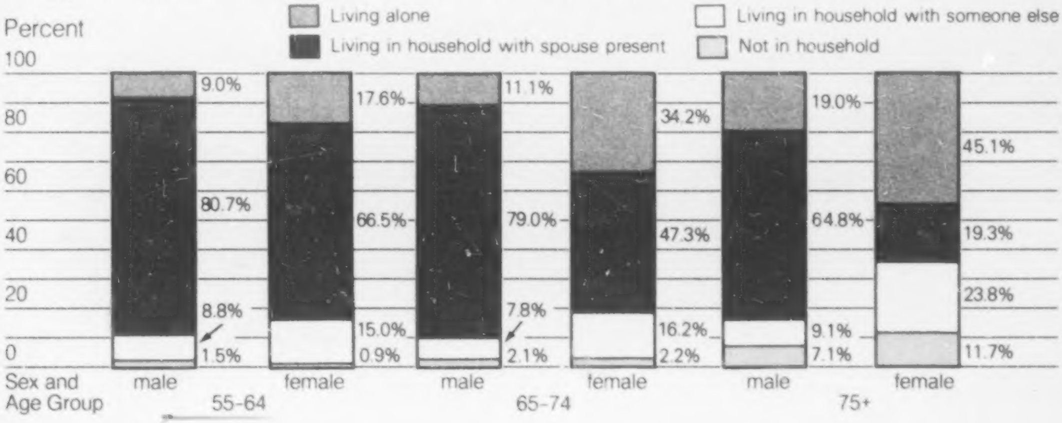
The preference for "intimacy, but at a distance" is supported by data showing that sharing a household with someone other than one's spouse is most common among individuals with presumably the fewest resources and options: women over 85, low-income families, minorities, immigrants and those living in rural areas, for example.[8]

The desire of the elderly to live independently is reflected in the dramatic increase in older people living alone and in the decline in the proportion that live with relatives.[9] In 1940 only about one in seven women aged 65 and older lived alone or in a household with only nonrelatives; by 1970 that ratio had increased to approximately one in three. (See Figure 2.)

While both the number and proportion of older live-alones, particularly widows in the advanced ages, have continued to increase in the 1980s, family members remain the source of help older people turn to first. For personal care over a long time period, the elderly seek help first from spouses, then from daughters, then from a sibling. If none of these is available, next in line is an extended family member (niece, grandchild or other) or a friend. Rarely is the person selected a professional.[10] Women make up about between 70 and 80 percent of the caregivers.[11] Most often, sons and male relatives are turned to for advice on business matters and help with transportation and home maintenance. If no female blood relatives are available older people usually turn to sons and daughters-in-law or male relatives for care involving intimate contact, such as feeding and dressing.[12]

Figure 2

Living arrangements of older U.S. men and women, 1982



Source: ref. 2

The data in Table 1 reflect these caregiving preferences. Formal programs provide care for only 16 percent of disabled elderly men and 21 percent of disabled elderly women. The children of the disabled elderly provide care for almost one-quarter of their fathers and more than one-third of their mothers. More than one in three disabled men are cared for by their wives, while only one in 10 disabled women are cared for by their husbands; this reflects the fact that women tend to marry men older than themselves and tend to live an average of seven years longer than men.

Table 1: Sources of care for the disabled elderly

	Care recipient	
	Male	Female
65 to 74		
Spouse	45	18
Offspring	21	29
Other relative	21	33
Formal	13	20
75-84		
Spouse	35	8
Offspring	23	35
Other relative	25	36
Formal	19	23
85 +		
Spouse	20	2
Offspring	34	39
Other relative	27	36
Formal	19	23
All 65 +		
Spouse	37	10
Offspring	24	34
Other relative	23	35
Formal	16	21

Source: ref. 5

Changing Context of Aging in the United States

The old are living longer and they are aging in ways that differ markedly from the experience of previous generations. The increasing numbers of frail aged are altering the nature of health concerns accompanying the aging process.

Disability and the need for assistance rise steeply with advancing age. Greater control over acute symptoms through medical technology has meant that people live longer after the onset of disease and need assistance at home to compensate for lost capacities. Thus, over the last two decades the major health needs of the elderly have changed from those associated with acute short-term illness requiring skilled nursing care in hospitals to needs associated with multiple chronic conditions requiring the use of drugs and help with ordinary daily activities.

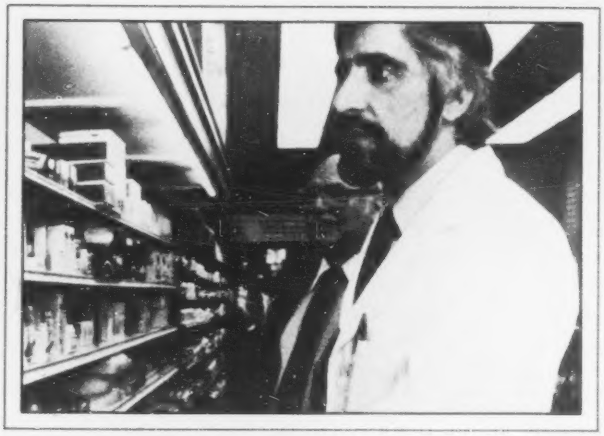
Care that involves extended unskilled attention to intimate personal needs can best be done by family members at home. Specialists in rehabilitation and geriatric medicine stress that care for the elderly should not be focused exclusively on treatment of acute symptoms in hospitals and nursing homes, but should include innovative approaches to helping impaired older people and their families organize their lives when they are faced with long-term dependency and the need for extensive personal care.

Growing numbers of elderly women. From age 75 onward, the older population is composed predominantly of women. In 1980, for example, there were 138 women aged 70 to 74 for every 100 men of the same age; among those 85 and older, the ratio was 229 women to 100 men. Care of the very old has increasingly become associated with women. Because the very old are more likely to live alone and to need financial support and help with daily activities, services to meet the special needs of dependent women must be given high priority.[13]

Due to longer life and the greater likelihood of being left without a spouse, women make up a greater share of the nursing home population than men. In the early 1980s, more than 25 percent of women aged 85 and older were living in nursing homes compared with only 14 percent of men in this age group.[14] The problems of institutionalized women are becoming a special concern among policy analysts looking at the implications of changing health needs.

Burgeoning need for long-term care. In 1985, approximately 6.6 million Americans aged 65 and older are in need of long-term care, almost one in 4 of those 28.8 million older Americans. Of this group, 1.4 million persons are living in nursing homes and another 5.2 million are living in the community with disabilities that leave them in need of help with the tasks associated with daily living.[15] The latter group is most likely to require long-term personal care from families and friends.

Since 1980, there has been a 14 percent increase in the number of older Americans in need of long-term care and the number is expected to grow at an even faster rate in the 1990s. Both the nursing home population and the disabled living in the community are expected to more than double between 1985 and 2020. (See Figure 3.)

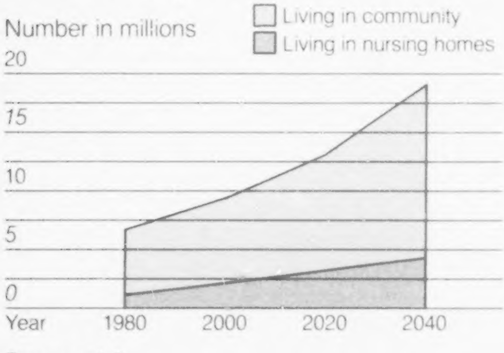


Increasing health care costs challenge the elderly and their families.

As the numbers of the very old increase, it will be necessary to provide varied systems of care to meet the needs of the diverse elderly population. Institutional care, one of the many long-term care alternatives, can be expected to rise in response to two related factors: increasing numbers of persons age 85 and older which is the age group most likely to suffer severe mental and physical impairments that are difficult for unskilled family members to care for at home, and public policies to improve the access to and the quality of custodial care.

Over the last two decades, government programs such as Medicaid and Supplementary Security Income have extended the scope of those eligible for public support, enormously increasing the use of nursing homes and hospital facilities. In the 22 years between 1960 and 1982, the public share of expenditures grew from 28 to 55 percent, with the amount spent on nursing home care growing the fastest of all. From $480 million in 1960 expenditures for nursing home care grew to $31.4 billion in 1984, an increase of 18.4 percent per year.[16]

Figure 3
Projected U.S. population 65 and older in need of long-term care, 1980–2040



Source: ref. 3

Increasing health care costs. Between 1977 and 1984, the total cost of health care for all persons 65 and older doubled. Government-funded Medicare, Medicaid and Veterans Administration programs now account for two-thirds of the $120 billion dollars spent annually for the health care of those 65 and older.

Gerontologists Beth Soldo and Kenneth Manton report that increases in the intensity and duration of health care needs in the oldest ages is concentrating the bulk of public expenses for reimbursement of Medicare services in the last two years of life. ''By postponing the age of death,'' they write, ''we also may be postponing the period of intense service need until even later in the life cycle where fewer financial and/or family resources may be available to ameliorate the public costs of long-term care.''[17] Given current trends, how well-equipped can we expect families to be to meet these challenges of aging in the future?

Challenges to Family Care

The financial burden. Now as in the past, families provide the most services for the aging. The cash value of services performed by families far exceeds the combined cost of government and professional services to both elderly living in the community and those living in institutions. A 1976 General Accounting Office study assigned values to services provided by family and friends according to the costs of the services provided through an agency. The cost of services from both sources varied with the older person's level of impairment, but family and friends incurred the majority of service costs at all levels. (See Table 2.) As the degree of impairment increased, the difference between the value of services provided by family and friends and the cost of public services increased as well. A 1984 report to the Federal Council on Aging estimated that the support provided to a disabled elderly family member accounted for the equivalent of full-time work in between 30 and 40 percent of households providing care.

Table 2: Average monthly costs of services for the elderly provided by friends, family and by agency.

Impairment Level	Family/ Friends	Agency	Total	Proportion Family/ Friends
Unimpaired	37	26	63	59
Slightly impaired	63	47	110	57
Mildy impaired	111	65	76	63
Moderately impaired	181	78	259	70
Generally impaired	204	100	304	67
Greatly impaired	287	120	407	71
Extremely impaired	673	172	845	80

Source: ref. 6

Human costs of caregiving. The financial costs to families providing home care to frail elderly relatives are only part of the burden on caregivers. In industrial countries around the world, family caregivers report emotional stress, conflicting demands on their time and energy, the unsettling of family routines and relationships, and disruption of living patterns— employment, recreation, social activities and participation in the wider community.

Because most of the elderly who need help are very old and most of the very old are widowed, their caregivers are primarily adult children—predominantly daughters, and, to a much lesser extent, daughters-in-law. Among those not yet widowed, spouses are also major providers of care for the very old—mainly wives, as seen in Table 1, page 6. Most wives providing care bear the burden with little outside help. Many of them are lonely, isolated and exhausted, and in need of help and support as much as the spouses they are looking after.[19]

Many caregivers are themselves aging. The average age of spouses providing care for a disabled husband or wife was 65 in the early 1980s, with 30 percent of the caregivers aged 74 and older.[20] Most adult children providing care to the very old are over 50. Although their personal circumstances vary enormously, many middle-aged women start to provide care for an aging parent when they are facing the challenges of their own aging: declines in physical energy, their husbands' retirement, and changes in life style and social commitments. A Philadelphia study found that in comparison with caregiving daughters under 50 years of age, those over 50 had older and more severely impaired mothers, spent much more time providing help, did more difficult caregiving tasks, more often shared their households with their mothers, and were themselves more often widowed and living on lower incomes.[21]

Changing Family Structure

The burden of aged support on family caregivers will increase as the numbers of very old and potentially dependent elders grow. This burden will be compounded by changes in family structure, putting particular pressure on middle-aged women who provide the bulk of personal care for their parents and aging husbands. Although developments since the 1970s are still too recent to assess, their effects on the willingness and capacity of families to provide care for older relatives deserve close watch.

The changing ratio of young to old. Increases in life expectancy, delayed marriage and the fall in the average numbers of children per family are increasing the ratio of parents to children available to look after them. (See Figure 4.) This ratio varies among age groups, reflecting the previous rise and fall in the number of births. Women born in 1905, for example, who are now about 80 years of age, married and bore their children during the Depression and had an average of 2.4 children apiece. Women born in the 1930s had more than three children on average and produced the baby boom generation. The baby boom daughters are expected to have fewer than two children each.

Significant increases in the ratio of the elderly 85 and older to their adult children have been occurring and are likely to continue over the next two decades. As noted, the high proportion of widowed and infirm among this age group places the greatest potential demand for care on adult children. Estimates of the ratio of disabled elderly to their offspring available to care for them during the next 70 years are shown in Figure 5.

Figure 4
Ratio of U.S. elderly to offspring, 1980-2050

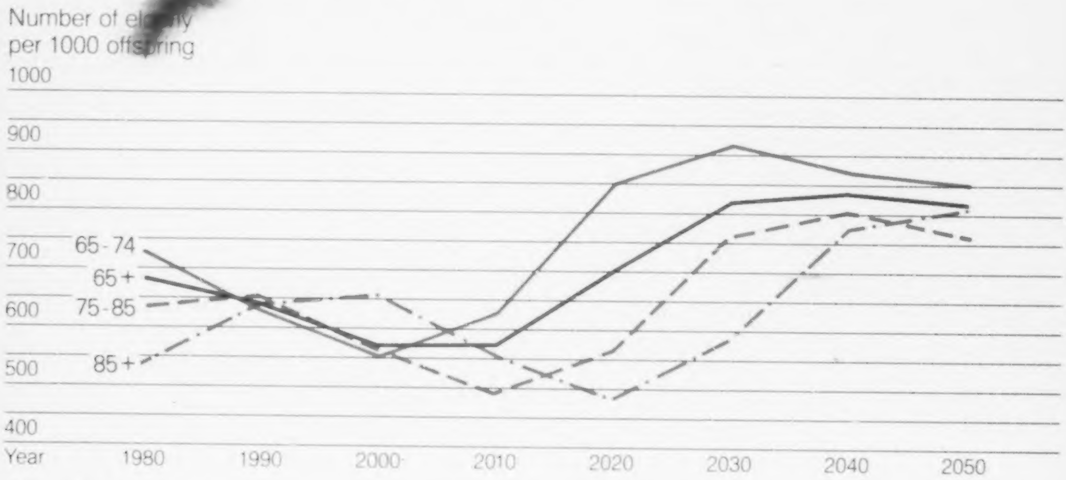


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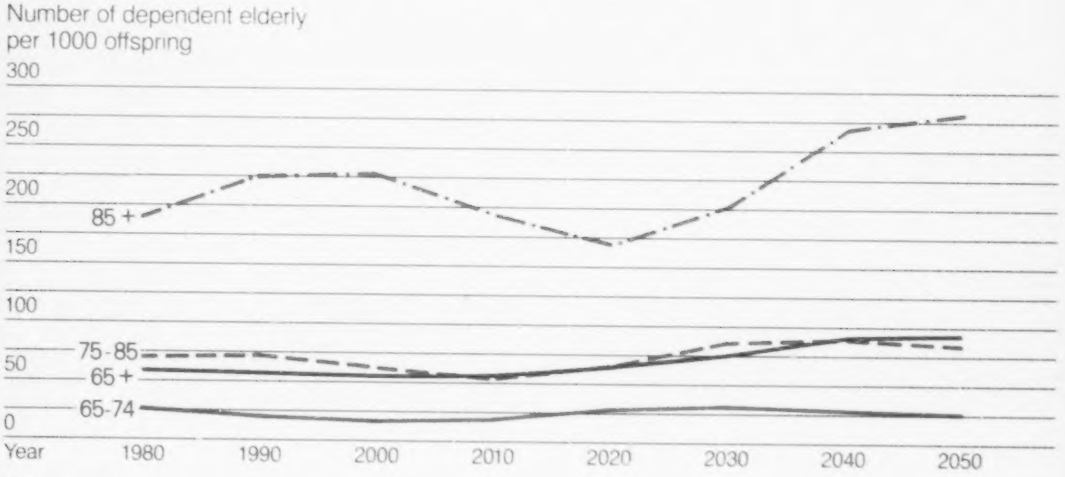
Figure 5
Ratio of dependent U.S. elderly to offspring, 1980-2050



Source: ref. 5

Women who care for their elderly mothers are themselves aging.

At every age, people are likely to have more older people in their families today than in the past. Three- and even four-generation families are becoming more common. One important consequence of these changes in family structure is the so-called "dependency squeeze." Research on successive generations of mothers, daughters and granddaughters shows that due to longer life expectancy and delayed childbearing a higher proportion of women today than at the turn of the century can expect to have parents and children simultaneously in the "dependent" age groups, that is, under 18 years old and over 65.[22] With responsibility for parents following closely after responsibility for children, the "empty nest" as a period of independence and carefree personal growth is for many middle-aged women simply the latest in our myths about women.

Although the lengthening of generations is particularly important for women as primary caregivers, men will by no means remain unaffected. A 1983 study of family networks and living arrangements over a 40-year period projects a four-fold increase in the proportion of men 65 and older with one or more surviving parents (from 7 percent in 1975 to 28 percent in 2015). Increases in the likelihood of a retiree having an octogenarian parent could have important ramifications for social trends that reflect the decisions of men (as well as women) to change residence, to retire from work, to time the purchase and sale of a home, and to adopt private insurance plans to cover parent care, for example.

Marriage, divorce and remarriage. Divorce has become more common and the interval between marriage and divorce has grown shorter. This trend increases the number and variety of households through which an individual may pass in his or her lifetime, and also the number and complexity of the average individual's kinship ties.

Family research has focused on the effect of such changes on parents and children in the early phases of the family life cycle. Yet a "family ripple effect" of divorce and remarriage also can have implications for kinship structure and family relations in later phases of the life cycle, affecting those who are both the parents of divorcing couples and the grandparents of these couples' children.[23]

There is no consensus among researchers on what current trends will mean for future family relations and support in old age. Some researchers claim that changes in family patterns such as rising rates of divorce and remarriage in association with longer life span (particularly for women) will actually diversify and enlarge the support systems the elderly can rely on for help.[24] But others, emphasizing the importance of adult children as the major providers of home care, believe these trends could weaken the bonds between parents and children that have cemented old-age support in the past.

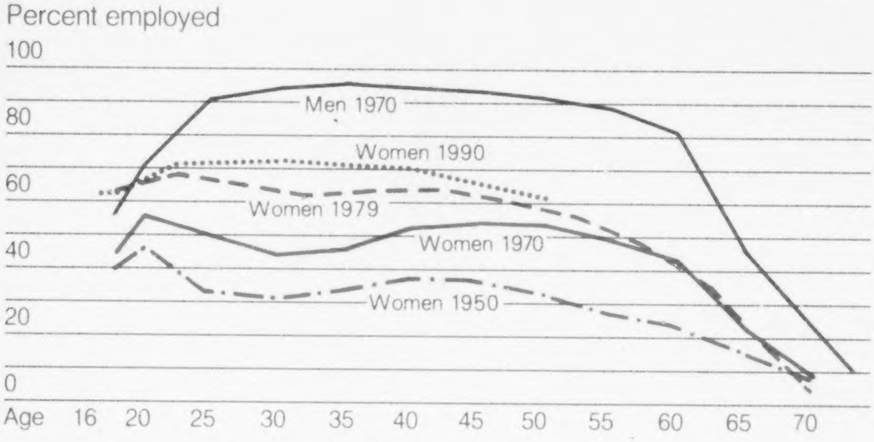
Proportion of women in the workforce. Surveys have shown that if asked whether they have a responsible person to turn to, four out of five older people answer "yes." It is not clear, however, whether the persons designated as responsible are always willing and able to provide care. Of all trends affecting the capacity and willingness of women to provide support in the long run, their extensive employment outside the home may be the most important.

Employment influences not only a woman's discretionary income, but also the time she has to give and her priorities and expectations about her rights and obligations as wife, mother and daughter. A 1976 survey of households contributing to the support of an older relative found that employment was highly associated with the tendency to seek institutionalization as an alternative to home care.[24] Those families where the wife was in the labor force and there was no other adult woman present were much more likely to choose institutionalization than were families in which either the wife did not work or there was at least one other adult woman present.

Projections of women's employment rates show an increase during the next several years at all ages up through age 55. (See Figure 6.) By 1990, 70 percent of women aged 35 to 44 and 61 percent of those aged 45 to 54 are expected to be in the labor force. Increasing

Figure 6

Labor force participation rates for women by age, 1940-1990



Source: ref. 6

involvement of middle-aged women in paid outside work will almost certainly have a significant effect on the pool of caregivers who traditionally have been able to keep the infirm elderly at home. Moreover, the changes noted in fertility, life expectancy and marriage may present a substantial proportion of the women in these age groups with the triple burden of care for a disabled elderly parent, children still living at home, and a job. Although researchers consistently find a commitment among women to support the older generation, it is reasonable to speculate that these trends could markedly disrupt that assistance.

Programs and Policies Affecting Family Care

Government programs that address the needs of older persons fall short of supporting families who care for the elderly. Many existing programs and new policy initiatives reflect ill-founded perspectives on the elderly and their family caregivers. Government policies still seem largely based on the assumptions that (1) the elderly form a separate social category isolated from the rest of the population, (2) families require incentives to provide care for elderly members at home or sanctions to prevent them from resorting to institutionalization, (3) family members (particularly wives and daughters) are and should be available to assume the financial costs and personal care of elderly frail relatives, and (4) conditions that apply to the elderly today will be the same for future generations of Americans. Such perspectives have led to public policies focusing on narrowly defined needs and to programs that are inconsistent with—at times even working against—efforts to sustain and encourage family caregiving.

Insufficient federal, state and community support for home care. The portion of the federal budget allocated to programs for the elderly is now very large and the federal government offers a vast array of resources and services. Initially, the focus of such programs was income support; now Medicare, Medicaid, Title XX, the Older Americans Act, the Food Stamp program, Supplemental Security Income, and Veterans Assistance programs encompass a whole gamut of life supports. However, the high cost of medical services has meant that a major share of government spending on the aged has gone into reimbursements for hospital and nursing home care. Moreover, the home care services that exist are difficult to obtain access to because administration and delivery systems span federal, state and local government. Lack of coordination among and between programs and the dispersion of authority across various levels of government have led specialists in aging to call the U.S. policy for the aged a "non-system." The delegation of responsibility to ever-narrower spheres of authority leads to fragmentation at two levels: in policymaking at the federal level and in policy implementation by public bodies at the state and local levels.[25]

Services to support and encourage care of the aging at home are particularly affected by the inconsistency between policy aims and program conditions. Medicare restrictions, for example, allow benefits for home care services only after episodes of acute illness and only for "skilled nursing." Thus little support is provided for unskilled family members who are the most likely to look after the chronically ill for long periods.

Home care through Medicaid. Beginning in 1981, states have been able to seek a waiver from the federal government to use Medicaid funds for home and community based services for low-income elderly individuals who, without such services, would require care in nursing homes. Programs carried out with Medicaid waivers constitute the major home care activities provided by states and federal government. The federal share was $69.1 million in 1984 and programs served an estimated 100,000 individuals.[26]

The waivers cover home health aides, help with chores, adult day care, respite care and other types of services including home modification (installing ramps for easy-access) and medical response buttons that give elderly the security of being able to call for help automatically.

Recently, conflicting views on the purpose of the waivers between state government officials and the Office of Management and Budget have delayed funds and threatened the use of these Medicaid funds as an alternative to institutional care. States have viewed the waivers as part of a strategy to provide more appropriate health and social services while OMB has focused on their cost-cutting potential. In late 1984, OMB urged states to save Medicaid dollars by removing people from institutions and providing services to them under the waivers rather than offering services to people who would otherwise need institutional care.[27]

Living arrangements and eligibility. An illustration of unintentional disincentives to family support is found in the effects that living arrangements and the economic resources of family members can have on an older person's eligibility and benefit level. Medicaid is available to anyone 65 and older below a minimum income level unless he or she lives as a dependent in someone else's house. Even if the household is headed by a relative, the older person stands to lose up to one-third of the entitled benefit.

Other Medicaid regulations can discourage a fitter partner from continuing to provide care for an ailing spouse. Spouses are expected to be financially responsible for each other. In determining the eligibility of the impaired spouse to receive home care benefits under Medicaid, their joint income and assets are considered. However, should the couple decide to resort to institutionalization, only the applicant's independent income and assets are considered. This policy can act as an incentive in some situations to cease the hard work of looking after an impaired spouse at home in favor of transferring him or her to a nursing home.

Dependent Care Tax Credit. Under the same federal income tax provision that allows working parents to deduct the day care of their children, family caregivers may deduct work-related expenses for the care of a disabled elderly person who is living with them. The costs of either in-home help or adult day care centers are deductible if all non-disabled adults in the household are working.

The maximum caregivers can deduct for the care of a disabled elderly relative is $2,400 and the tax credit received is between 20 and 30 percent of this amount depending on the household's income. However, the actual costs of daytime care for a disabled elderly individual far exceed the deductible amount.

This provision has received very little publicity. It appeared on the income tax return "Short Form" for the first time in 1983. Some policy analysts believe that all who are eligible are not taking advantage of this deduction and the Internal Revenue Service maintains no records on how many people use the deduction for the care of a disabled elderly adult.

Cash incentives. A number of experimental programs are studying different ways to encourage families to continue providing home care. Policy analysts have considered a variety of incentives including direct monthly payments for services, vouchers, and low-interest loans.

The use of cash incentives assumes that families would not care for their elderly relatives without additional rewards and that financial rewards are more effective than other kinds of help. When questioned in surveys, caregivers say that their primary need is relief from the daily drain of providing long-term assistance.[28] When given a choice among a list of specific services (economic support programs, medical care and homemaking services), homemakers cite services as top priorities. Among persons actually providing care for the elderly infirm, services to ease caregiving tasks (day and overnight care outside the home to give the caregiver a break, for example) and the support of others through group discussions were seen as more crucial than financial incentives. This is not to imply that the financial costs of caregiving are negligible, only that among those actually looking after the impaired elderly, emotional stress is considered more serious than economic strain.

Shifting federal costs to families. Another policy approach to induce greater family care involves financial disincentives. The Reagan Administration has encouraged states to require adult children and other relatives of Medicaid recipients to be financially responsible for their institutional care, thus saving public dollars and discouraging nursing home use.[29] As of 1984, 22 states

Some state programs provide home care for the aged

were considering such legislation and Idaho, Indiana and Virginia had passed bills but had not put regulations into effect. Widespread opposition in New York caused the proposal to be dropped there.

Whatever its consequences for the quality of intergenerational relations, this policy (and others like it) seems based on questionable assumptions: (1) that families are capable of absorbing an even greater share of the financial responsibility of caregiving than they do now; (2) that a policy of deterrence is necessary to keep families from placing their older relatives in institutions; and (3) that treating family support as a cost-containment resource will raise substantial revenue or cut down on public expenditures. As described earlier, the demographic characteristics of the nursing home population together with the character of their family networks belie this reasoning. The institutionalized elderly are very old, very ill, and unlikely to have a strong network of close relatives. Their adult children, if they have any, are often nearing retirement and are themselves facing the challenges of aging.

A policy of financial disincentives would withdraw what is already a minimum floor of security from families that are managing, even if inadequately and with great stress, to provide crisis and emergency care. It also ignores research showing that community support sustains and encourages family members to continue those services they do provide and helps to deter institutionalization.

Increasing the elderly's proportion of health care costs. Unless serious attempts are made to control increasing medical costs and curtail further cutbacks in Medicare and Medicaid, it is estimated that the share of health care costs paid by the elderly themselves will increase more than twice as fast as their incomes. In 1984, the elderly had already begun to use more of their income for health care than they had before Medicare and Medicaid were developed. Overall, the elderly now spend an average of 15 percent of their income for health care.[30] If current trends continue, by 1999 the elderly will pay 36 percent of their own care: 49 percent of physician care, 53 percent of nursing home care and 69 percent of drugs and other care. If the elderly are expected to pay a larger share of their own medical costs, much of this additional private expense will probably fall upon families already sustaining many invisible expenses associated with care for the elderly, including home modifications, rented equipment, special food, higher heating bills, and the "opportunity costs" to women of giving up employment and discretionary time.[31]

Legislative proposals. Recognition of the importance of families to aged support and concern about the growing slice of public funds allocated to programs for the elderly are prompting policymakers to seek new ways to strengthen informal systems of care without transforming the quality of care provided into a formal, bureaucratic entity. Concern for the family situations of millions of elderly suffering from Alzheimer's disease and other related psychological disorders, for example, led public officials to call for community-based treatment centers as alternatives to institutionalization.[32] The so-called "CARE Bill" (H.R. 2280) was introduced in the House in April 1985; it seeks to address the caregiving problems associated with severe psychological disorders and improve assistance for Alzheimer's victims and their families by creating model state programs that encourage education, increase support services, and expand research and training of professionals.

Another bill, S. 1181, is designed to provide home care for the elderly without some of the eligibility restrictions required by Medicaid. It would make $100 million available to states each year for three years to be used to coordinate existing programs and to provide home and community services. The bill is expected to be considered in Fall 1985. A more costly version of the bill was adopted by a Senate committee during the last congressional session but later dropped due to Administration opposition.

New approaches. A variety of programs are being tested through experimental projects involving small groups of people over limited time periods; many of these programs are funded through the Medicaid waivers discussed above. Projects initiated in Maryland, Florida, California and New York are investigating the extent to which different kinds of support given to family caregivers may postpone institutionalization. Cash credits, home attendants, respite care, day care facilities, and home help services are being studied. Some of the innovative approaches to providing emotional support to family cargivers are: family seminars providing information about the aging process, instruction in caregiving skills and emotional support to give families a greater sense of control; support or self-help groups; respite services that provide short periods of in-home relief for caregivers; and day or overnight services outside the home that give caregivers relief for a few hours or days.

Other experimental projects are attempting to establish a single entry point for the provision of services by coordinating and integrating the efforts of existing agencies. Beyond the demonstration phase, however, there is no evidence to suggest that larger scale attempts to integrate programs and close gaps will be successful. Many questions remain about the appropriate balance between help provided informally by family, friends and neighbors and formal assistance from public sources.

Policy Implications

Policymakers cannot ignore the trends that threaten families' ability to care for their frail and infirm relatives. In the future, rising numbers of very old will only increase the magnitude and complexity of providing care for the aged. Can the elderly be cared for in a manner that is both appropriate and cost-effective? Based on what is known about changing health needs of the elderly and changing demographic trends, what can be done to help families support their older members?

- *Support families in their efforts to provide care.* Families already bear the major share of social support (including costs related to health) for their elderly members. Efforts to reduce the public burden for health care by increasing the share assumed by families could be counterproductive. For all but the most impaired elderly, the financial cost of providing care at home is less than the cost of providing similar services in institutions.[33] However, forcing adult children and relatives to contribute a greater share of financial support, assumes, contrary to all available evidence, that families do not help as much as they can or that family members (many of whom are growing older and entering retirement themselves) can safely afford the extra financial drain.

Equally important, the strain on caregivers must be considered in any cost calculation. If the burden of caring for a disabled elderly relative becomes too great and the goodwill and personal reserves of the caregiver are exhausted, serious consequences for both the elderly dependent and the family emerge. The caregiver's own health may be impaired, institutionalization may be sought, older dependents may be abused or neglected, and families may break down under conflicting loyalties to their own interests and needs of an older relative. Thus, the health and quality of life of those who provide care is tied—and therefore of equal importance in policy terms—to the health and quality of life of the aging who receive support.

Pilot programs, although limited in scope, have shown that providing services such as respite care, day care for the elderly, home help, overnight and temporary care do not inhibit caregiving, but encourage those providing care to continue their efforts. Also needed is a pool of semi-skilled helpers who can come into a home and take care of shopping or cooking or housecleaning when the caregiver is overburdened, or when the elderly person becomes ill or has just returned from the hospital. This type of general assistance is sometimes available through private agencies, but for the majority of families it is prohibitively expensive. Government subsidies are necessary to make it widely available. For all but the most impaired elderly, trained helpers at home could be potentially less costly than institutional care.

- ***Recognize that the context of family caregiving is changing.*** Demographic trends and their impact on family support will need to be closely watched to assess their importance to people moving into older ages in the future. Families now provide 80 percent of all care for infirm elderly relatives. As social trends reshape family ties and alter women's roles, and as the numbers of the very old and potentially dependent elderly increase, bonds between family members will be subject to pressures that may affect the availability and willingness of relatives to undertake extensive care at home. For example, will today's generation of women entering the workforce be willing to give up jobs and independent income to stay home to nurse aging, ill relatives? Incentives such as flex-time, job sharing and adult day care centers have been suggested to enable working women to retain their jobs and still care for an elderly relative. Suggestions have also been made about ways to reward neighbors, friends and more distant relatives for looking after infirm elderly at home. Innovative approaches are necessary to identify areas where families encounter the greatest difficulties, and to develop support services to strengthen the assistance families already provide.

As the proportion of the population over 85 grows, increasing numbers of elderly will require more care than family caregivers can afford or provide at home without substantial help. For these caregivers and for those elderly with no close relatives available to provide support, custodial arrangements will be a necessary part of the continuum of support services. Thus, high among the priorities concerning care for tomorrow's elderly is finding alternatives to long-term institutional care. Many approaches will be needed to contain escalating costs and conserve public and private resources, including rationing services through screening the most severely impaired who have no alternative support, a greater emphasis on preventive health care such as diet and exercise to curtail disabling conditions, a system of required "co-payments" to make the elderly share responsibility for their medical costs, and the development of "intermediate" housing with affordable health services— possibly supported by community networks on a voluntary basis.

Western European countries with a larger proportion of elderly persons in their populations than the United States are already experimenting with many of these remedies. Countries like the United Kingdom, Netherlands, Belgium, Sweden and Denmark place greater emphasis on the public sector and pay a higher bill for social services. The United States must be prepared to do likewise if all Americans are to anticipate a secure old age.

Values and Priorities

How American society will pay for these extensive services involves questions of values and priorities. Some examples include: the relative worth of people of different ages; the legitimacy of claims for public support of different disadvantaged minorities; the rights of women in mid-life to choose employment over caregiving; the mutual obligations of parents and children at different stages of life; the responsibilities of individuals for insuring their own support in old age; the costs of family care versus institutionalized care, including the indirect costs for health and well-being of caregivers as well as the direct monetary costs of medical care; and the interest of older people who need help versus the interests of caregivers who provide it.

Two facts are central in considering these issues: first, the old are not "they," the old are "we." All of us are aging and decisions made now about aged care will affect the quality of health care and social support available to us in later life. Second, although many live alone, the aged are not isolated but are interacting members of extended families. Policies that affect the aged affect their families also.

In a much-discussed paper entitled, "Children and the Elderly: Divergent Paths for America's Dependents," University of Pennsylvania sociologist Samuel Preston argues that conditions during the last two decades have deteriorated for children and improved dramatically for the elderly. Increased social spending on the elderly, he says, reflects a national priority. He suggests that diverting funds to the old and away from the young is not a defensible public policy: "Whereas expenditure on the elderly can be thought of mainly as consumption, expenditure on the young is a combination of consumption and investment."[34]

This reasoning assumes that the elderly can be separated from the rest of the population and that their well-being is not only less valuable than that of other age groups, but has no repercussions for younger age groups. It also implies that the United States lacks the economic capacity to make sufficient provision for the young and the aged simultaneously.

The elderly must be seen as an integral part of family networks; their well-being is tied to the well-being of their adult children and grandchildren. Investment in the elderly is not only wise public policy to nurture the human resources older people represent, it is also wise policy because it indirectly nurtures the families of which older people are members. Safeguarding the human and material resources represented by children is not served by a perspective that devalues the older generation, because the younger generation will eventually grow old as well.

Policies that affect the aged affect their families as well.

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POPULATION TRENDS AND PUBLIC POLICY

Conflict in Central America:

The Demographic Dimension

by Sergio Diaz-Briquets

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Conflict in Central America: the Demographic Dimension is the tenth in a series of occasional papers, Population Trends and Public Policy, published by the Population Reference Bureau, Inc. This series is devoted to a discussion of demographic issues of concern to policymakers.

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Conflict in Central America: The Demographic Dimension

In Summary

Seven years after the first signs of political upheaval in Nicaragua, the countries of Central America are still at war with themselves. Those countries not threatened with military violence face other enemies—rising population rates, continued economic downturns and widespread poverty.

High population rates have long burdened the region's social and political institutions. Since 1945, Central America's population has tripled in size. During the 1960s, the region had one of the highest population growth rates in the world; only recently have population growth rates dropped to below 3 percent per year.

How should Central American leaders address this population crisis? Is the violence now besetting the region an outgrowth of population increases or are other factors involved in the dilemma? How much does population contribute to the region's ills?

Social demographer Sergio Diaz-Briquets argues that the current crisis in Central America has resulted from a complex interplay of political, economic, and social factors. Rapid population increase has aggravated tensions caused by decades of political turmoil and unequal economic growth. Recent events in the world economy have added to the region's problems.

After World War II, the Central American economy began to diversify. Between 1950 and 1978, the region's real per capita growth doubled, and the economies of six countries-Costa Rica, Honduras, Nicaragua, El Salvador, Panama and Guatemala—grew at a 5.3 annual rate. This growth raised expectations among the people, creating pressures for broader political participation. But the 1973 world oil crisis started Central America's economy reeling. In the early 1980s, markets for the region's exports dried up and trade began to deteriorate. Central America's once bright future now darkened.

Hand in hand with this decline were incidents of violence and political unrest. A tradition of unequal land distribution, aggravated by the development of large export-oriented farms that excluded peasants from the land, added to a sense of social injustice. Education levels, although improved, remained inadequate in many countries. Unemployment caused by the economic downturn increased. The poor masses in urban and rural areas faced sub-standard living conditions with few if any social services. The result was bloody uprisings that fueled revolutionary movements.

In the light of these underlying causes, population growth, according to Diaz-Briquets, must be put in proper perspective. Nonetheless, demographic trends cannot be overlooked. According to United Nations projections, by the end of the 20th century population in the region will have increased 60 percent, to 40 million. The burden caused by this growth affects unemployment, education and standards of living—all contributors to economic and political unrest.

Diaz-Briquet's conclusion is that the development of family planning programs must be made within the framework of political and economic reform.

Honduras
Nicaragua
Guatemala
El Salvador
Panama
Costa Rica

Conflict in Central America: The Demographic Dimension

by Sergio Diaz-Briquets

The current situation in Central America is a multifaceted tragedy that has focused world attention on this often forgotten region. For those familiar with Central America, the crisis is not surprising; telltale signs of impending turmoil have been apparent for many years, provoked by a complex interplay of historical forces. These forces have shaped a highly unstable environment: weak political institutions, inequitable social systems and underdeveloped economies.

The unprecedented demographic transformation that occurred in the region following World War II is an important factor in the current crisis. In a brief 40 years, the population of Central America tripled. Rapid population growth exacerbated many of the region's problems. It aggravated existing socio-economic inequalities (in access to land and income) and increased demands for employment, housing and other social needs.

The Political and Socio-economic Context

Central America has long been a politically and economically unstable region. As in other volatile areas, political institutions are weak and democratic structures almost nonexistant. Military coups are frequent and dictatorial governments a fact of life. Governments in the region have historically served the privileged elite and powerful foreign interests. Although several countries are involved in uncertain attempts at democratization, only Costa Rica has reached that goal. The current crisis is an offshoot of this lack of legitimate political institutionalization.

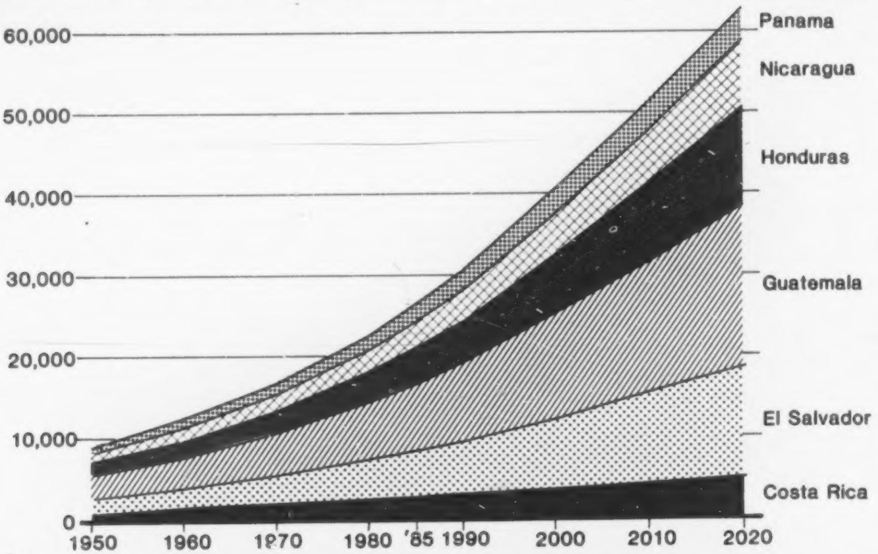
Economic factors also have played an important role. While population growth rates have received considerable attention, equally high economic growth rates in the decades preceeding the current crisis are sometimes overlooked. Between 1950 and 1978, the economies of the six Central American republics—Costa Rica, Honduras, Nicaragua, El Salvador, Panama, and Guatemala—grew at an annual rate of 5.3 percent. During this interval, the region's real per capita income doubled.

Central America's economy was transformed as a result of this economic growth. The region diversified its economic base and loosened its dependency on the production of a few key agricultural commodities. By the late 1970s, regional exports included an array of farm products and some manufactured goods. Intra-regional trade also expanded, partly through the workings of the Central American Common Market. Road networks and other transportation facilities grew severalfold, advances in electrification were made, and the number of schools and health facilities increased substantially.[1]

These positive developments, however, failed to improve living conditions for a majority of the people. Economic growth, particularly in the countries now facing the most instability, disproportionately benefited high- and middle-income groups. The gap between the

Donated food being given to Guatemalan mothers of malnourished children.

Figure 1
Estimated and projected population of Central America: 1950 to 2020



Source: ref. 1

living standards of the well-off and those of the poor widened. For some, living standards rose, but not as fast as expectations, which had been fueled by a freer flow of ideas worldwide.

The forces unleashed by these economic developments collided with social structures and political systems unable or unwilling to adapt to new circumstances. For example, a broadly based national coalition in Nicaragua overthrew the dictatorial rule of the Somoza family. Major divisions and armed conflicts arising from divergent plans for the country's future now challenge Nicaraguans. In El Salvador, forces of the extreme right and left battle each other and the government, while moderate democratic elements struggle to avoid an extremist outcome. The situation in Guatemala is highly volatile; decades of violence and injustice have laid the foundation for intense, bloody conflicts. In these countries, traditionally privileged groups, including the powerful landowners and military, continue to resist calls for social and political reform. Countries more responsive to these demands—Costa Rica and to a lesser extent Panama and Honduras—have so-far avoided the violence now engulfing other Central American nations.

The economic slump provoked by the jump in OPEC oil prices in 1973 added to the economic turmoil. The subsequent contraction of the world economy is one of the most important ingredients in the current crisis; the region's economic downturn is directly related to its extreme vulnerability in the world market. Weaknesses in economic development strategies and natural disasters, such as earthquakes, have contributed to the area's decline.

As long as economic growth rates remained satisfactory, a potentially explosive situation remained under control. Unrest began as the effects of the worldwide economic crisis were felt. Oil price increases, reduced demands for the region's exports, a deterioration of trade and inflation all played havoc with Central American economies. The enormous financial pressures forced by an expanding foreign debt and capital flights intensified the economic turmoil. And the involvement of foreign powers added a new dimension to an already complex problem.

Population Trends: Aggravating the Problem

The combined effects of these economic developments aggravated latent structural problems. Rapid population growth contributed to these problems even more. (See figure 1.)

During the 1960s, population growth rates for the Central American countries were among the world's highest. Growth rates for these countries averaged more than 3 percent per year compared with a world rate of 2 percent. By 1985, the region's growth rate had dropped to below 3 percent, mainly because of declines in Costa Rica and Panama. Rates in the other Isthmian countries have declined only moderately if at all.

Between 1950 and 1985, Central America's population nearly tripled, growing from 9.1 to 26.4 million. This rapid increase in population is expected to continue into the foreseeable future. The United Nations projects that the region's population will reach 40 million by the end of the 20th century, a 60 percent increase in 15 years. Another 56 percent increase is anticipated between 2000 and 2020, by which time there will be 62 million Central Americans.

These high growth rates primarily result from the interplay between birth and death rates. Improved public health and medical advances imported from the industrialized countries after World War II brought spectacular mortality declines in Central America, as in other regions of the developing world. In the absence of off-setting fertility declines, population rates soared as fewer babies died in infancy and more adults lived to old age. Only recently has international migration played a role in the region's population dynamics.

Death rate declines have not been of similar magnitude in every country. Death rates fell more rapidly in socio-economically advanced Costa Rica and Panama than in the other countries of the region. Country by country differences in mortality declines have been so substantial that in 1985 death rates in all countries except Panama were double those in Costa Rica, with Honduras and Nicaragua having the highest mortality rates. (See table 1.)

Birth rates have fallen markedly in Costa Rica and Panama since the 1960s, but much less or not at all in the other countries. Despite these declines in Costa Rica and Panama, the population in these two countries has continued to grow rapidly, largely because of greater numbers of infants surviving into their childbearing years.

Costa Rica and Panama stand in contrast to other Central American countries with respect to several additional demographic indicators. In fact, for these indicators, Costa Rica and Panama's rates are nearly comparable to those observed in most developed countries. Life expectancy at birth, for instance, is more than 70 years in Costa Rica and Panama, and only in these two countries are infant mortality rates below 30 per thousand live births. By comparison, infant mortality is 11 per 1,000 in the United States and life expectancy at birth is 75. In the other Central American countries, except for El Salvador, life expectancy at birth hovers around 60 years (although these estimates are likely to exclude war-related mortality). These countries have infant mortality rates three to four times higher than Costa Rica and Panama.

Regional differences in fertility also are evident. In 1985, total fertility rates in Costa Rica and Panama stood at 3.5 children per woman. In the other four countries, the rate exceeded 5, with the average Honduran woman having about 6.5 children. As might be expected, contraceptive prevalence rates are much

Table 1:
Basic demographic indicators of Central America, 1985

	Population in thousands	Crude birth rate	Crude death rate	Rate of natural increase	Total fertility rate	Infant mortality rate	Life expectancy	Population under age 15	Population 65 plus
Costa Rica	2600	30.5	4.2	26.3	3.5	20	73.0	36.7	3.8
El Salvador	5552	40.2	8.1	32.1	5.6	71	64.8	44.6	3.4
Guatemala	8403	38.4	9.3	29.1	5.2	68	60.7	43.1	3.0
Honduras	4372	43.9	10.1	33.8	6.5	82	59.9	46.9	2.9
Nicaragua	3272	44.2	9.7	34.5	5.9	85	59.8	46.7	2.5
Panama	2180	28.0	5.4	22.6	3.5	26	71.0	37.5	4.5

Source: ref. 6

higher in Costa Rica and Panama. In Panama and Costa Rica for example, more than 60 percent of married women of childbearing age use modern contraceptive methods. In the other countries, the comparable figure is 35 percent or less.

Previously, high fertility rates, and, to a much lesser extent, mortality, have shaped the age distribution of Central American countries, leaving almost half of the population under age 15. Thus working adults are required to support a large number of dependents. Only in Costa Rica and Panama is less than 40 percent of the population under age 15. By contrast, 30 percent of the United States population is under age 15.

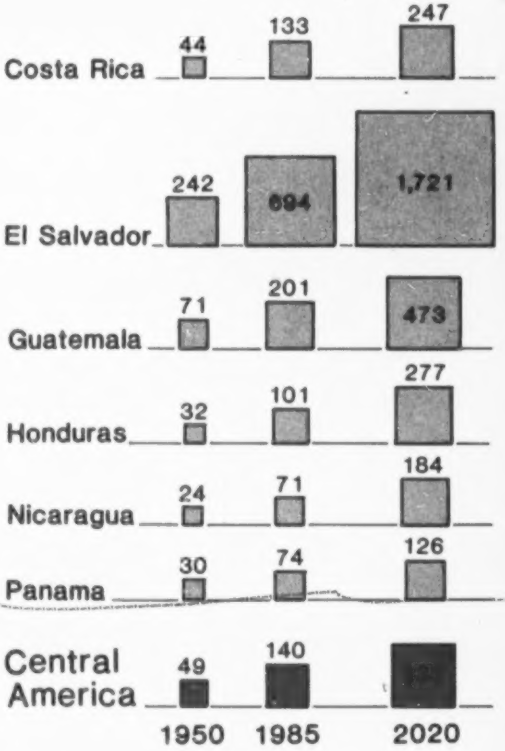
Only now is the proportion of children in the Central American population beginning to decrease. This means that for several decades the number of potential mothers, as well as the number of new students and labor-force entrants, will continue to rise. Labor-force growth rates reflect former fertility rates as well as other factors, including changes in the number of women looking for work. For these reasons, labor-force growth rates in almost every Central American country now exceed population growth rates.

Several decades of rapid population growth have drastically increased population density in the region. (See figure 2.) Between 1950 and 1985, the number of people per square mile nearly tripled, from 49 to 140. This is generally lower than comparable figures for Europe but more than twice as high as in the United States. By the year 2000, the number of people per square mile is expected to reach 214, and by 2020, 333.

Average population density for the region conceals substantial variation from country to country. In 1985, four countries had population densities of 133 persons or less per square mile. The lowest population densities were found in Nicaragua and Panama, each containing 71 and 74 persons per square mile respectively. In Guatemala, the figure was 201 and in El Salvador 694. El Salvador has a population density three to ten times greater than that of its neighbors. By 2020, the population density of El Salvador, according to the latest projections, should reach levels comparable to 1985 figures for Bangladesh, one of the world's most densely settled countries.

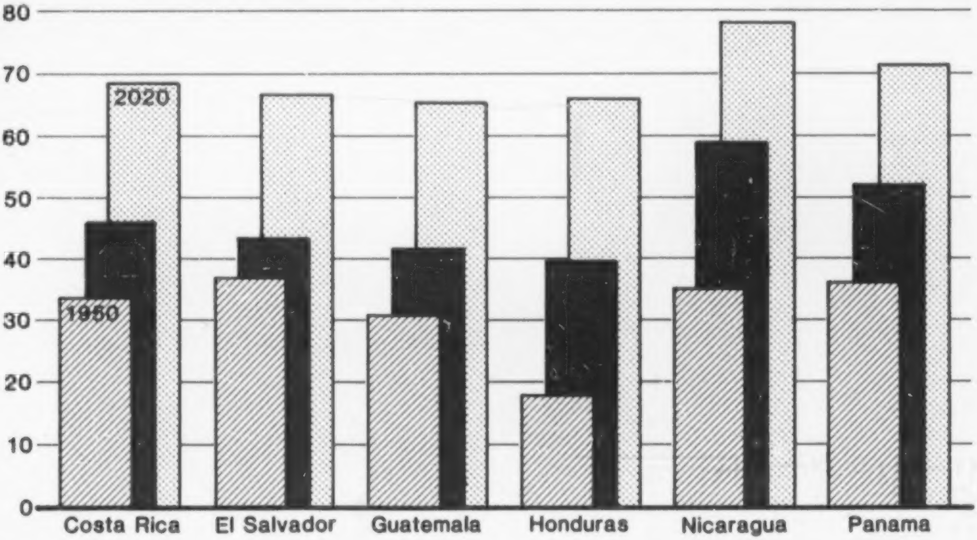
As in the rest of the developing world, population increases have been accompanied by rapid urbanization. Yet Central America is less urbanized than the rest of Latin America. Whereas in 1985, 66 percent of the population of South America was urban, only 45 percent of Central Americans lived in urban areas. Levels of urbanization within Central America, however, are substantial. (See figure 3.) Urban population growth rates during the 1980 to 1985 period were greater than 4 percent, reflecting the continued high level of migration from the countryside to the cities. Guatemala and Hon-

Figure 2
Population density (per square mile): Central America, 1950 to 2020



Source: ref. 2

Figure 3
Percent of the population urban: Central America, 1950 to 2020



Source: ref. 3

duras are more rural countries, and Nicaragua and Panama more urbanized.

Central America has undergone remarkable demographic change over the last 40 years and will experience equally dramatic changes in years to come. To what extent these changes have interacted with other developments to produce the current political crisis is discussed in the following sections, in which the effects of land tenure, land use, employment, education and living conditions in general are reviewed.

Land Tenure: Maintaining the Status Quo

Over the past several decades, the agricultural sector has failed to accomodate the needs of a growing number of Central American peasants. Although land provides a livelihood for close to half of the economically active population, most of it is owned by very few individuals. Only now are some significant shifts in ownership taking place.

Highly inequitable income distribution is associated with extreme land concentration in agrarian societies. Relatively few large landholders control most, and usually the best, lands and receive disproportionate shares of the wealth generated by agricultural products. Large landholders also tend to specialize in producing export crops and to use modern production methods that require less labor, thereby increasing already high levels of unemployment and underemployment. In contrast, small landholders toil on minute farms that even under intensive cultivation cannot sustain a family. The contradictory goals of agricultural modernization and creation of additional rural employment are a familiar, if difficult to resolve, dilemma facing poor and basically agricultural nations attempting to develop.

El Salvador is a worst-case example. During the 1970s, almost 90 percent of all farms in the country were too small to sustain a family. When such an inequitable land-tenure system prevails, small landholders and landless peasants live precariously because they depend, partly or fully, on limited and highly seasonal employment on large estates. Aggravated by rapid population growth, which increases the numbers in the labor force, rural wages are kept low—essentially at the subsistence level—and employer/employee relations become semi-feudal in nature.

The introduction of modern agricultural methods has exacerbated the situation. Higher earnings generated by the export sector and fiscal policies favoring capital-intensive agriculture have intensified land concentration and led to the replacement of manual labor by machinery. This has reduced further the labor-absorbing capacity of rural areas. Land fragmentation through inheritance, the expansion of large holdings and capital-intensive agriculture add to competition for land among the growing number of peasants and, even more grave, between peasants and large landholders. The result is increased pauperization of the rural poor and an outmigration from rural areas to cities or unoccupied lands.

The Shift in Land Use

According to the latest estimates of the United Nations' Food and Agricultural Organization, between 1975 and 1982 alone the land area covered by forests and woodlands in Central America declined from approximately 44 percent to 38 percent.

Central American countries differ in the amount of forested areas they contain. (See table 2.) In every country except El Salvador, forests account for 30 percent or more of the total land area. In Guatemala and Panama, more than 40 percent of the land is forested. In El Salvador, the most densely populated country in the region, only 6.2 percent is forested. The rough and mountainous topography of the region partly explains the relative abundance of forests; it also represents an impediment to agriculture.

The ongoing land-conversion process has only partially resulted from population pressures. One such process, slash and burn agriculture, practiced by primitive subsistence peasants, usually does not result in permanent removal of the forest cover. Forest land is permanently transformed when peasants or large agricultural concerns continuously farm or plant crops in what were once virgin forests. This may occur when landless peas-

While beef production brings in valuable export earnings, there is some worry about the long-term consequences of land-conversion practices.

Table 2:
Land use in Central America, 1975 and 1982

	Costa Rica		El Salvador		Guatemala		Honduras		Nicaragua		Panama	
	1975	*1982*	*1975*	*1982*	*1975*	*1982*	*1975*	*1982*	*1975*	*1982*	*1975*	*1982*
Arable land and permanent crops	10.0	12.5	31.6	35.0	15.2	16.4	14.6	15.8	10.4	10.6	7.4	7.7
Permanent pasture	32.2	42.8	29.3	29.4	10.7	12.3	30.4	30.4	38.7	42.1	15.3	15.3
Forests and woodlands	43.5	32.3	8.1	6.2	45.5	40.5	40.0	34.9	42.5	35.9	56.8	54.1
Other land	14.3	12.4	31.0	29.4	28.6	30.8	15.0	18.9	8.4	11.4	20.5	22.9

Source: ref. 7

ant farmers expand agricultural frontiers or when large commercial farms increase production for export. But this expansion, according to many observers, is not so much a result of population increases as of the lack of available farmland due to the concentration of land among a few landholders. For example, in El Salvador, most of the reduction in forest cover results from the cultivation of crops in what were once forest areas. But this is influenced as much by the peasants' lack of access to farmland as by population pressure on the land. (See box.)

Conversion of forest land to pastures in some countries is the main culprit in the drastic reduction in the region's forests. Nicaragua and Costa Rica are good examples; in the latter, a 10 percentage point increase in the area of permanent pastures (from 32 to 42 percent) was recorded over a seven-year period. Expansion of the number of pastures can only indirectly, if at all, be linked to population growth. In fact, pastoral activities use little labor and may displace labor engaged in more traditional endeavors. Large-scale agricultural entities producing beef for export account for the expansion of pasture lands. During the 1960s and 1970s, the Central American countries, Costa Rica most of all, embraced development strategies that emphasized economic diversification and increased exports. Substantial increases in beef production, favored by leading multinational lending agencies, were oriented to serve the needs of markets in developed countries. The link to population increase lies in the need for export earnings to sustain rapidly growing urban populations, which are fed by migration of workers displaced by the diversification process, among other reasons.[2]

While the emphasis on beef production achieved its objectives, there is some worry about the long-term consequences of land-conversion practices. These benefits may be limited, and conversions may cause serious ecological damage. Cleared lands run the risk of becoming unproductive and incapable of supporting a forest or accomodating future population growth.

Clearing forests for agricultural uses also has been a favored policy in relieving rural tensions caused by population growth and unequal land distribution. Governments have preferred to resettle landless peasants rather than to implement agrarian reforms opposed by the oligarchy. As the limits to forest conversion are approached in countries such as Costa Rica (because of conservation efforts), the focus of agrarian reform efforts has shifted to the purchase and distribution of large and uncultivated holdings. More recently, land-reform measures throughout the region have intensified, often under great political pressure.

While the short-term effects of population growth on land use should not be overestimated, it is unrelenting population growth in future decades that will become a leading instigator of change in land use. The population momentum associated with the region's age structure ensures that population size, and hence population density, will continue to increase rapidly for several decades,

Demographic Crisis in El Salvador

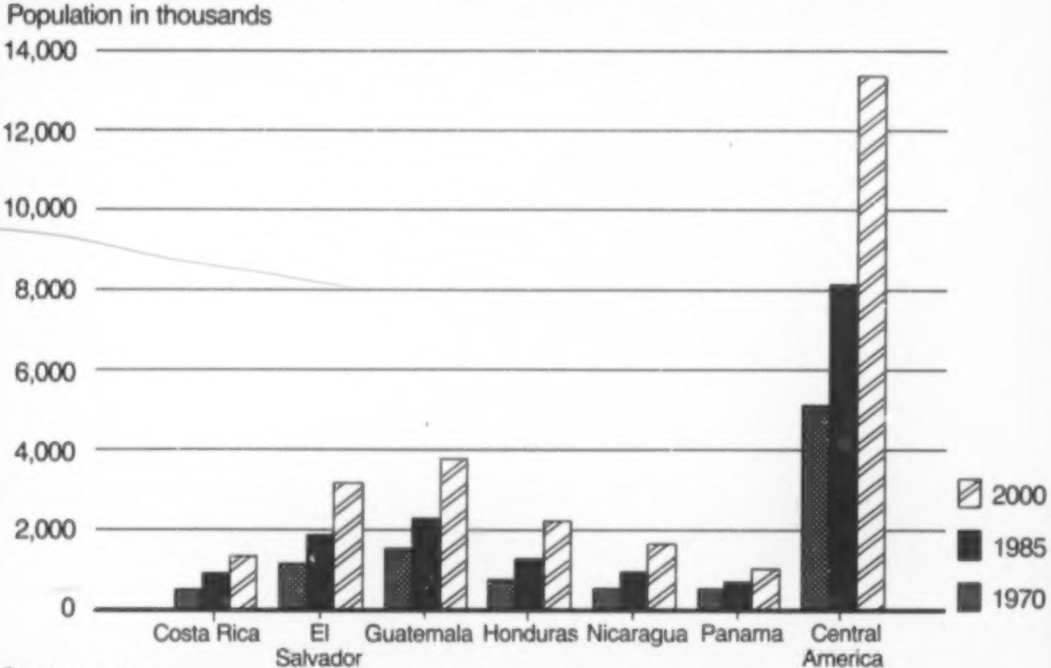
El Salvador merits special attention because in many minds it epitomizes demographic crisis. Seriously damaged ecologically and with one of the highest population densities in the Western Hemisphere, the country has nearly attained its maximum population carrying capacity. One must remember, however, that the population carrying capacity of a nation (a rather elusive concept in itself) is also a function of changing technology, human capital and the workings of human institutions.

The severity of the socio-economic plights of the rural poor in El Salvador lies more in the greed and inhumanity of the country's oligarchs than in an absolute shortage of agricultural land, according to William H. Durham. In a study of the ecological causes of the 1969 war between El Salvador and Honduras, Durham concluded that extreme land concentration was a more important determinant than population growth or land competition between small farmers in both countries.* Fifteen years after Durham's study, the absolute increase in the number of peasant families in El Salvador has outrun the availability of agricultural lands. But even now, and while literally looking into the barrel of a gun, large landowners continue to resist land redistribution attempts.

Unjust power structures also cause urban poverty. It is worsened, however, by high population growth. The alleviation of poverty in El Salvador, as in many other Central American countries, can be achieved only through promoting higher economic growth rates and equitable social systems. This must be accompanied by a decrease in population to levels more in accord with the country's potential and consonant with its long-term interests and those of its neighbors.

*Durham, William H., *Scarcity and Survival in Central America*, Stanford University Press, Stanford, 1979.

Figure 4
Central America: Growth of labor force 1970, 1985, 2000



Source: ref. 4

even if fertility declines occur in the near future. If the Central American countries are to prosper economically, they must increase their industrial and service sectors because there are limits to the number of people the rural sector can absorb. El Salvador has reached the point at which virgin lands are almost exhausted. It is estimated that even if all three phases of an agrarian reform program being implemented in El Salvador were to be completed, some 150,000 peasant families, or about 31 percent of all farm families, would remain landless.[3] The simple reason for this is that there is not enough land to distribute. Future population growth will make the situation more acute.

Employment and Education

Employment is at the crux of the Central American crisis, and in turn is closely associated with the region's population growth. The increase in the size of the economically active population since the 1960s has been dramatic, and it is likely to continue unabated well into the 21st century. The United Nations Latin American Demographic Center (CELADE) estimates that the region's economically active population doubled in size in just 15 years, from 2.08 million in 1970 to 4.16 million in 1985. (See figure 4.) It is expected to double again over the next 15 years, reaching more than 8 million by the turn of the century.[4]

Rapid labor-force growth intensifies pressure on a labor market already suffering from chronic unemployment. Unemployment rates—in all countries at 10 percent or higher—are somewhat misleading because they do not include underemployment, which is estimated to exceed 30 percent. The current economic crisis and the destruction of productive infrastructures in several countries due to armed conflicts have caused the situation to deteriorate further.

The labor force is not a homogeneous entity. It is one thing to provide work to the unskilled and a far different matter to create employment for the educated and more skilled. While the latter are potentially more productive, they also have greater expectations, require higher wages and seek work opportunities that are more costly to finance.

Notable gains in educational attainment have occurred in Central America over the past few decades.

Primary school enrollment rates in Costa Rica, Nicaragua and Panama now approach 100 percent and have risen rapidly in all other countries. (See table 3.) Significant gains have likewise been made at the secondary level; in 1981, only in Guatemala and El Salvador were secondary school enrollment rates below 20 percent. Levels of higher education enrollments soared between 1960 and 1980, increasing in some cases by five times or more.[5]

Despite these impressive gains, serious educational deficits persist. Educational curricula generally are not well suited to the region's needs, and the quality of education is less than ideal. Substantial declines in illiteracy rates have been accompanied, almost without exception, by increases in the absolute numbers of those who cannot read or write. The needs of earlier generations and population growth have retarded progress despite considerable educational expenditures.

It is not difficult to establish links between labor-force growth, unemployment, rising education levels and social and political instability. Frustrated expectations have always been linked to revolution. With limited channels for social and economic mobility, it is not surprising that the young and better-educated are at the forefront of movements to change unjust and archaic political and economic systems. These systems thwart expectations and preclude political participation. Younger generations are aware of the discrepancies between the official rhetoric of liberty, equality and progress and the realities of inequality and privilege for the few. Getting the better-educated involved is the key to mobilizing public opinion and to motivating the poor masses who usually provide the cannon fodder of revolution.[6]

The Condition of Poverty

The pronounced social inequities in Central America are reflected in available income-distribution estimates. (See table 4.) The poorest 20 percent of the people receive only 3.7 percent of the total income, or an average of $90 per capita per year. Fifty percent of the people subsist on an average of $200 a year. The richest 20 percent receive seven times as much as the poorest 20 percent.

The United Nations' Economic Commission for Latin America estimates that 65.4 percent of the region's population is either extremely poor or unable to satisfy all its basic needs. In Costa Rica, only 24.6 percent of the population is estimated to be poor, as opposed to El Salvador, Honduras and Guatemala where more than 60 percent of the population is poor. (See figure 5.) Poverty levels are far more severe in rural areas; in some countries, 80 percent or more of the rural inhabitants are

Table 3:
Educational indicators of Central America

	Number enrolled in primary school as percentage of age group		Number enrolled in secondary school as percentage of age group		Number enrolled in higher education as percentage of population aged 20–24	
	1960	*1981*	*1960*	*1981*	*1960*	*1981*
Costa Rica	96	108	21	48	5	26
El Salvador	80	61	13	20	1	4
Guatemala	45	69	7	16	2	7
Honduras	67	95	8	30	1	8
Nicaragua	66	104	7	41	1	12
Panama	96	111	29	65	5	27

*Gross enrollment ratios may exceed 100 percent as some students are above or below the official 6-11 year primary school age group.

Source: ref. 8

poor.[7] This partially explains the high rates of rural to urban migration. The poor are not much better off in urban areas where employment opportunities are limited. Rapid population growth aggravates these inequalities, particularly because competition for scarce resources intensifies, and per capita income tends to be lower in poor families with many children. The poor and less-educated are likely to have more children than the better off.

Extreme poverty causes a great deal of human suffering, particularly when contrasted with the conditions under which the wealthy live. Not only are income levels of the poor insufficient, basic social services for the poor also are shortchanged. Modern medical services are limited and concentrated mainly in cities. Poor nutrition and unsanitary living conditions combine to increase the incidence of disease; infectious diseases are the major causes of death in the region. (See table 5.) In all countries except Costa Rica and Panama, the average daily caloric intake falls short of minimum requirements. Because these estimates do not take into account the way in which food is distributed, the nutritional status of the poorest income groups is even more precarious than suggested by the statistics.

Two decades of rapid but uneven economic growth in Central America were unable to improve the diet of the poor. Between 1965 and 1967 and 1974 and 1976, the proportion of malnourished children (under 5 years of age) increased from 25 percent to 33 percent; by the mid-1970s, there were 1.1 million malnourished children in Central America, an increase of 67 percent from the

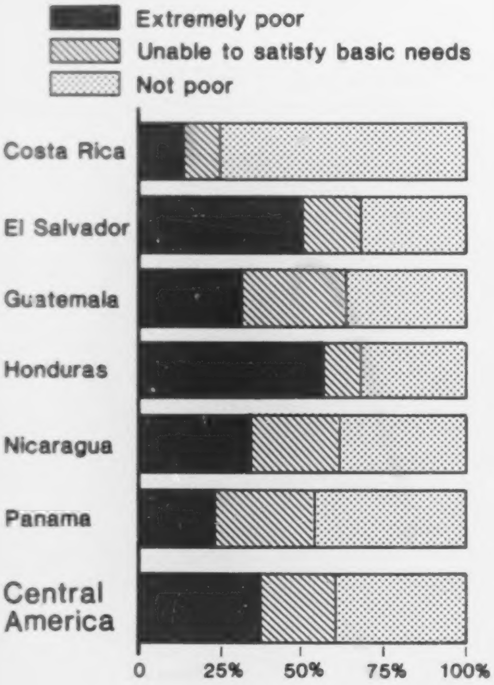
Table 4: Percent of total income and average income of the poorest and richest in Central America towards 1980, in 1970 United States dollars.

	Poorest 20 percent		Richest 20 percent	
	% of Income	*Avg Income*	*% of Income*	*Avg Income*
Costa Rica	4.0	177	49.0	1165
El Salvador	2.0	46	66.0	1536
Guatemala	5.5	111	55.0	1134
Honduras	4.3	81	59.3	796
Nicaragua	3.0	62	58.0	1200
Panama	2.7	120	60.3	2710
Central America	3.7	90	57.4	1423

Source: ref. 9

Notable gains in education have been achieved in the past few decades; in some countries primary school enrollment is approaching 100 percent.

Figure 5
Percent distribution of degree of poverty estimates: Central America towards 1980



Source: ref. 5

mid-1960s.[8] Only Costa Rica was able to reverse this trend; its fertility decline, along with more equitable socio-economic policies reduced the number of malnourished children. More recently, Panama has made significant inroads in improving nutrition and health. This also may be occurring in revolutionary Nicaragua despite serious economic difficulties. A recent study suggests, however, that progress in health-care has been interrupted by the destruction accompanying the guerilla war in Nicaragua.[9]

In view of the nutritional statistics, it is not surprising that infant mortality rates are high. Once again, Costa Rica and Panama are the exceptions. Elsewhere, and consistent with the high infant mortality rate, large numbers of deaths are ascribed to enteritis and other diarrheal diseases, the leading causes of death in the region. Children, and particularly malnourished children, are vulnerable to these conditions. The incidence of infectious diseases is greatest where there are unsanitary living conditions, such as lack of clean water and inadequate sewage services. Even in urban areas, only about half of the population has piped water; comparable access is severely limited in rural areas. Except for Panama, sewer services are available to only 20 percent or less of the population and are practically nonexistant in rural areas of some countries. Housing conditions in the poorest countries are deplorable. Shantytowns surround the major cities; housing in rural areas is even worse. In El Salvador, for example, more than 50 percent of urban housing and 80 percent of rural housing fail to meet the minimum standards for habitation. Millions of new dwellings are required to adequately house the existing population, and more will be needed for future growth.

The Impact of Demographic Factors in the Crisis

To sum up, the root causes of the crisis are, first, a long history of injustice and political repression, and second, the severe impact the economic depression has had on the region following several decades of rapid economic growth that raised popular expectations. As political scientist Robert Pastor has stated, the crisis is largely a result of change and not stagnation.[10]

Rapid population growth is undeniably involved in the crisis. It has added pressure to labor markets already saturated with unemployed and underemployed persons; it increases pressure on the land, and it taxes governments' abilities to provide needed social services. Indirectly, rapid population growth plants seeds of discord by continuously increasing the ranks of unemployed youth and creating stiffer competition among those trying to improve their lot in life, particularly in ossified social systems. The role of population growth in the crisis is indirect in that it aggravates existing problems by acting, as Alan Kelley has described it, in an "accomplice" role.[11] Poverty and closed political systems do not come about primarily from sheer increases in human numbers. To a large extent they result from faulty human institutions, poor economic conditions and natural resource constraints. Rapid population growth aggravates these problems, particularly when economic growth is sluggish.

Demographic Consequences of the Crisis

Political crises and the violence accompanying them have had a noticeable but immeasureable effect on Central America's demographic processes. Most visible are the voluminous flows of refugees and internally displaced persons generated by the fighting. Most tragic are the many deaths produced both directly and indirectly by military clashes and other violence. Some of these effects are short term and will barely affect the future of the region. Others are likely to be felt for decades to come.

The number of people displaced by war in Central America began to rise when violence in the region increased during the 1978 Nicaraguan revolt against Somoza. Approximately 60,000 Nicaraguans had become refugees by the time Somoza was toppled in 1979, the majority of whom returned home once the new government came into power. Others, however, fled at that time. Between 1979 and the present thousands of Nicaraguans sought asylum in Honduras and Costa Rica.

The violence in El Salvador is estimated to have displaced between 500,000 and 750,000 persons by 1984 (the actual figure depends on the estimate chosen).[12] About one-fourth of the refugees are believed to be in Mexico, with many others thought to be in other Central American countries. Some observers believe that up to half-a-million Salvadoreans have migrated to the United States without official documents of entrance (the statistical basis for these estimates, however, is weak.) In addition, many Guatemalan and Nicaraguan refugees are residing in the United States. Approximately 46,000 Guatemalans are living in 30 United Nations' sponsored refugee camps in southern Mexico; more Guatemalans

A doctor examines a Nicaraguan baby suffering from a diarrheal disease, one of the leading causes of death in Central America.

Table 5:
Health related indicators of Central America

	Population per				Daily calorie supply per capita	
	Physician		Nursing Person		total	As percentage of requirement
	1960	*1980*	*1960*	*1980*	*1981*	*1981*
Costa Rica	2740	1460	720	450	2686	118
El Salvador	5330	3220	—	910	2146	94
Guatemala	4640	8610	9040	1620	2045	93
Honduras	12620	3120	3110	700	2171	96
Nicaragua	2690	1800	1250	550	2184	99
Panama	2730	980	760	420	2271	103

Source: ref. 10

Mothers and babies in the waiting room at a health clinic.

are living outside the camps.[13] Central Americans also can be found in Canada, Europe and other Latin American countries.

The number of persons displaced within the countries might well be greater than the number of international refugees. Counterinsurgency campaigns and guerrilla activities in El Salvador, Guatemala and Nicaragua have uprooted hundreds of thousands of people. Many of these individuals have been forcibly relocated by the military, while the remainder have simply fled to escape the violence. Many flock to major urban centers. Demographer Linda Peterson estimates that by 1983 more than 430,000 Salvadoreans had left their habitual places of residence. She concludes that approximately 20 percent of El Salvador's population, counting both internally displaced and international refugees, have fled their homes, a vivid indication of the magnitude of the phenomenon.[14] Many of those migrating to other countries may have done so for economic reasons, although in practice it is difficult to separate their motivations.

One can only speculate on the long-term consequences of these population displacements. Central American countries are losing through migration many of their most skilled workers during their most productive years. Many migrants have suffered serious disruptions in their lives—education has been interrupted, life-savings lost and marriages postponed. Those who have fled abroad may help perpetuate future emigration as they try to reunite their families. If undocumented immigrants are allowed to legalize their status in the United States, for example, this flow could increase rapidly. Migrant earnings remitted to relatives left behind, already an important source of financial support for families in El Salvador, also are likely to rise.

The number of deaths produced by armed clashes and political assassinations runs into the tens of thousands. An even greater number of deaths is likely to have resulted from malnutrition, discontinuations of social services and poor or nonexistant medical care. Most vulnerable are young children.

Some attempts, however, have been made to mitigate the consequences of internal strife. In February 1985, a brief truce was called in El Salvador to allow health personnel, assisted by international agencies, to immunize 400,000 people.[15] In addition, unconfirmed press reports suggest that the Nicaraguan government's efforts to expand its network of primary health-care facilities is having an impact on that country's high infant mortality rate. While these efforts may be signs of hope, mortality rates continue to rise where violence occurs.

The effect of the crisis on fertility is even more uncertain and difficult to measure. Fertility rates decline during periods of hostility because marital separations, deaths and emigration lead to fewer conceptions and a decrease in the number of births. Disruption of family planning services, on the other hand, may induce an increase in the number of unwanted pregnancies.

Due to the combined effects of changes in birth, death and migration rates, population growth in the countries most affected by the violence is likely to have declined. While refugee flows reduce population growth rates in countries of origin, they have the opposite effect in asylum countries. To what extent population growth rates have decreased is unknown. But higher mortality and temporary fertility reductions caused by war are among the notorious Malthusian checks that have historically arrested population growth. Finally, the social and economic disruption that accompanies political upheaval has not helped the region's employment situation and has had chaotic consequences for the provision of even the most rudimentary of social services.

The Future

Solving political and economic crises and putting an end to continued bloodshed are Central America's top priorities. It is impossible to anticipate the ending of conflict, but regardless of how it occurs, there is little doubt that the conflict has accelerated the socio-economic transformation upon which Central America embarked in the post-World War II era.

Once the immediate political problems are settled, Central America will again have to tackle the more intractable issues of sustained socio-economic development and rapid population growth. In a world of rising expectations, bringing about socio-economic reform will be a far more difficult and complex proposition. Many of these expectations have been acquired from advanced industrial societies. To satisfy those expectations is a tall order—one that Central American economies are presently ill-equipped to handle.

Very high population growth rates are incompatible with a just and prosperous Central America. Continuation of rapid population growth will impede socio-economic advances and further exacerbate many existing constraints. A more equitable and prosperous social order, however, would be a major ingredient in reducing population growth rates. Once the needs of the poor are served—in education, employment, health, housing and other areas—modernizing influences will gradually begin to erode traditional cultural norms favoring large families.

Development of regional population policy needs to be responsive to what its politically progressive opinion leaders perceive to be current political, economic and social realities. These leaders are well aware of the detrimental effects of rapid population growth, but they also face political and cultural sensitivities. In this context, isolation of population from issues of social and economic structure would be counterproductive. To the extent that family planning programs can be promoted with a framework of social evolution and economic growth, emphasizing benefits to the health of mothers and children and the welfare of the family, they are likely to attract broad support and contribute to the building of a better future for the region's inhabitants. A lot more can be achieved "quietly rather than loudly," as the Wiardas suggest.[16]

Many rural dwellings fail to meet the minimum standards for habitation.

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POPULATION TRENDS AND PUBLIC POLICY

Demographic Trends Tax the IRS

by Peter A. Morrison
and Paola Scommegna

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Demographic Trends Tax the IRS is the eleventh in a series of occasional papers, Population Trends and Public Policy, published by the Population Reference Bureau, Inc. This series is devoted to a discussion of demographic issues of concern to policymakers.

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Demographic Trends Tax the IRS

In Summary

Demographic changes reshaping U.S. society will make the IRS's job of processing individual tax returns more difficult in future years. During the rest of the 1980s and into the 1990s, the IRS will be faced not only with more returns but more complex returns, the result of social changes such as increasing divorce and remarriage, single parent families, dual-earner couples and retirees working part-time. At the same time, shifts in the labor force brought on by an aging baby-boom generation and the baby-bust generation's move into their working years will make it harder for the IRS to maintain an experienced work force to tackle the job.

In this latest issue of *Population Trends and Public Policy*, Peter A. Morrison of the Rand Corporation and Paola Scommegna of the Population Reference Bureau examine the trends affecting tax collection from a policy perspective. While they focus on the impact of demographic change on the IRS, they note that the same impact will be felt to varying degrees by state tax administration offices and thus it must figure into planning at both the state and national level.

Most Americans are aware of the demographic shifts affecting our society—the trend toward smaller households, changes in work patterns and the age makeup of the population, and regional migration. The combined impact of these trends, however, presents a major burden for the IRS.

Smaller and more varied households are increasing IRS's work load. These smaller households are different from households 20 years ago. Today there are a greater proportion of childless couples, children living with only one parent, people living alone (elderly widows in particular) and unrelated people living together. The large numbers of divorced and remarried individuals present the IRS with compliance problems as parents who do not have child custody claim exemptions or as parents continue to claim dubious exemptions after they remarry.

The jump in the number of wage-earning wives has sharply increased the proportion of high-income families. The number of taxpayers with an income over $50,000 have risen steadily in recent years—growing from 2.2 million in 1980 to 6.9 million in 1984. As the baby-boom generation reaches middle-age and the peak of their income-earning years, unprecedented numbers of dual-earner couples will be in the $50,000-plus income bracket. By 1992, 18.6 percent of all individual tax returns are expected to top the $50,000 mark.

These high-income taxpayers are costly for the IRS—they tend to make more errors in their calculations (presumably because of the variety and complexity of their sources of income) and they tend to file itemized 1040 forms which cost the IRS 28 percent more to process than the 1040A forms.

Among the elderly, more retirees are working part-time as independent contractors or are self employed. This type of work situation presents compliance problems for the IRS because "off-the-books" exchanges are sometimes used. The increase in coverage of Keogh, IRA and other pension income received by growing numbers of retirees will further complicate tax processing.

The IRS's ability to process the more complex tax returns of the future will be affected by the changing age mix of the population. The IRS itself has a higher-than-average proportion of baby boomers in its own work force. In future years, this large number of baby boomers will have to compete for fewer upper-level positions. With limited opportunity for advancement, the IRS may lose some of its most qualified workers, just when they are most needed. At the same time, as the relatively small baby-bust generation enters the labor force a shortage of entry-level workers is foreseeable. As a result, the IRS may be forced to pay more for entry-level programmers and accountants.

Regional migration has brought population decline in the northeast and relatively rapid growth in the Mountain and Sun Belt states. Much of this growth is occurring in small and medium-sized towns. For the IRS this will mean a more dispersed population to service and a faster-growing work load in regions not equipped to handle it.

The impact of new legislation on the IRS is more difficult to predict. The Gramm-Rudman-Hollings budget-balancing law may mean a budget cut for the IRS. The tax reform plans now under discussion may cut down on the number of people who choose to itemize, saving the IRS time and money. According to the report's authors, the demographic trends affecting the IRS must be carefully weighed as policy makers work to reform tax policy and seek to limit federal spending.

Demographic Trends Tax the IRS

by Peter A. Morrison
and Paola Scommegna

Although some taxpayers may respond to the news with uncharitable crocodile tears, several ongoing demographic trends transforming U.S. society will confront the Internal Revenue Service (IRS) with difficult challenges in carrying out its mission through the rest of the 1980s and the 1990s. Of course, these changes will affect everyone's lives—including those of taxpayers—but the IRS will be affected uniquely.

The demographic trends challenging the IRS during the next 15 years fall into two broad areas: managing a return-processing work load that will grow larger and more complex for demographic reasons; and maintaining a balanced, experienced IRS work force in the face of demographically induced changes in the labor market.

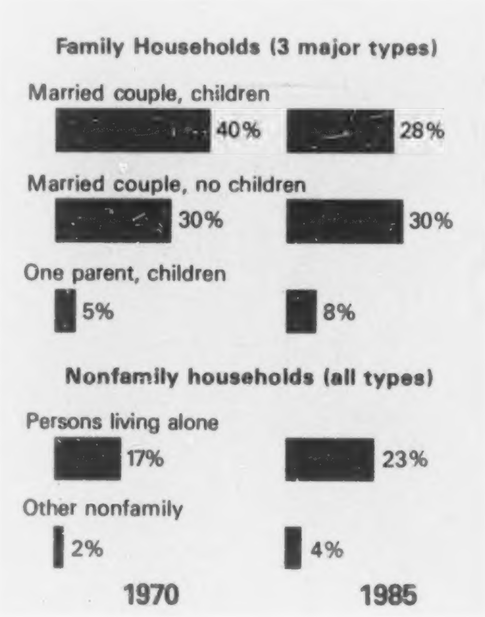
Four major demographic trends underlie these challenges: (1) the population's reconfiguration into smaller household units, especially those consisting of persons living alone; (2) changing employment patterns, particularly the shift of married women into paid employment and the resulting rapid increase in dual-earner families; (3) changes in the proportion of the population in various age groups; and (4) regional migration which is causing some areas to gain population and other areas to lose.

Household Reconfiguration

American households are becoming smaller and more varied. Smaller households are not simply shrunken versions of larger ones. There are now more childless couples, children living with only one parent, unmarried parents, people living alone (elderly widows in particular) and unrelated people living together. In 1985 the average household had only 2.7 members—fewer than ever before—and the number is shrinking. By the mid-1990s the size of the average household could drop even further, to as low as 2.3 persons.

It has become necessary to describe household in two broad categories: family and nonfamily. Among family households, the traditional married couple with children is the only type of household that declined

Figure 1
Proportion of U.S. households by living arrangement type, 1970 and 1985



Source: ref. 1

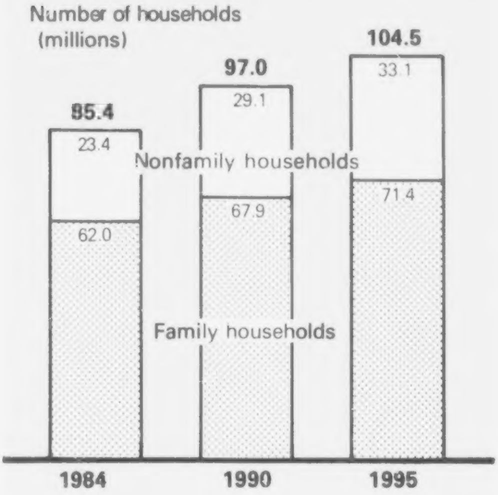
relative to the others—dropping from 40 percent of all households in 1970 to only 28 percent in 1985 (Figure 1). Couples have been postponing parenthood or foregoing it altogether. Thus, there still are families, but fewer with children. In the other direction, the one-parent family is on the rise as marriages dissolve and as unmarried mothers keep their babies. One-parent families now comprise 8 percent of all U.S. households and about 11 percent of all families.

Nonfamily households have also multiplied in recent years. The vast majority consists of persons living alone: young people not yet married, people between marriages, and (roughly one-third of the total) elderly persons. Nonfamily households now make up nearly a quarter of all households, and therefore have altered the numbers and types of taxpaying entities. The growing prominence of nonfamily households is reflected in Figure 2, derived from U.S. census figures. The total number of households is expected to expand from 85.4 million in 1984 to 97.0 million in 1990, and nonfamily households will account for more than half of that 11.6 million gain.

The reasons for this dramatic change are not difficult to locate. For some time now, growing numbers of young couples have been divorcing—and doing so earlier in their lives. Consider the marriages of women who were 55 years old in 1980. (See Figure 3, page 4.) Not until age 43 did the divorce level among these women reach 25 percent. By comparison, women who were born two decades later and are now age 35 reached that level at age 29, 14 years earlier.

Figure 2

Current and projected number of U.S. households by type, 1984, 1990 and 1995

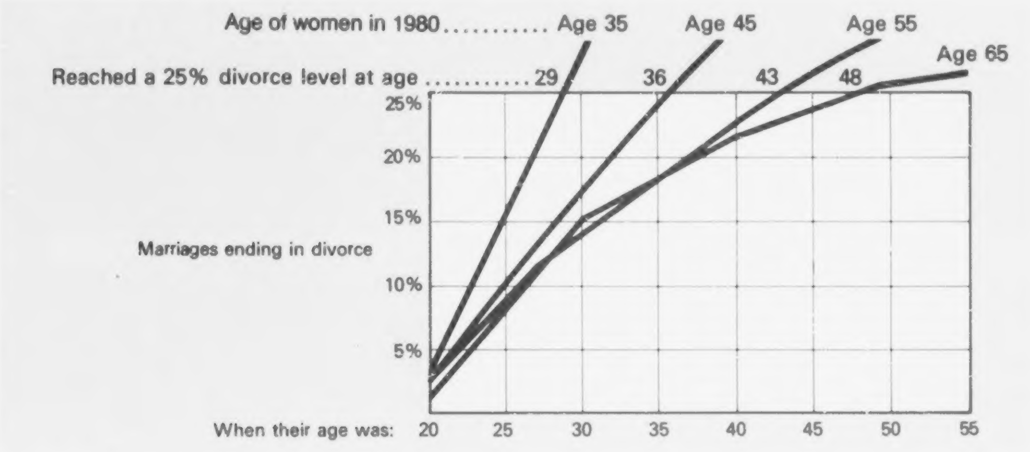


Source: ref. 2

Changes in labor force participation rates have combined with other trends to make the IRS's work load more complex.

Figure 3

Age at which 25 percent of U.S. women had experienced divorce, by age group, 1980



Source: ref. 3

Most divorced people eventually marry again; until they do, they are demographically "between marriages." Where children are involved, such people confront the IRS with a potential compliance problem: the duplicate or otherwise questionable exemptions claimed by parents who do not have child custody and who may continue to claim dubious exemptions even after they remarry.

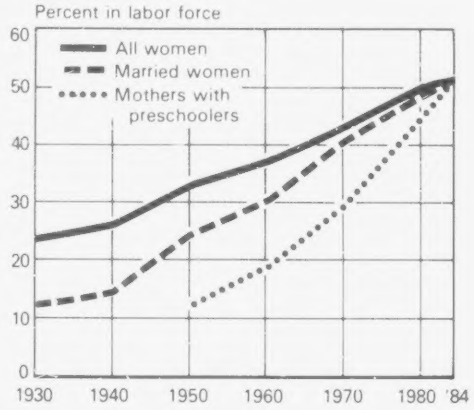
Changing Employment Patterns

The IRS work load also has enlarged with the influx of married women into the work force. Wage-earning women have sharply increased the proportion of high-income families. Since the two-paycheck family earns about two-fifths more income than families where the husband is the sole earner, they are more likely to file an itemized and otherwise complex tax return with multiple attached schedules. And when they retire, dual-earner couples are likely to file returns that will necessitate a multitude of computerized matches to check IRA and Keogh accounts and other sources of pension income accumulated over the course of each spouse's working career.

The rise of dual-earner couples can be attributed to the tide of young wives—including those with preschoolers—entering the work force. By 1984, more than half of all mothers with preschoolers were in the work force (Figure 4). Obviously, young wives have made important changes in the way they order their careers as mothers and income earners. They now go to work earlier in life, go back to work soon after their children arrive, and tend to stay in the work force. One result has been that mothers with preschoolers

Figure 4

Labor force participation of wives and mothers, 1930 to 1984



Source: ref. 4

now hold paying jobs at the same rate as women generally.

It would be useful to know how much higher women's labor force participation rates will climb—and how fast. The comparisons of various age groups in Figure 5 give some indication. These data reveal that a profound change has transformed women's lives. Successively younger generations of women are displaying progressively higher labor force participation rates at a given age. For example, nearly two-thirds of women currently in their 30s are in the labor force, and more than half of them were already at work in their early 20s. These rates are substantially higher than those registered at the same age by the generation of women who are currently in their 40s.

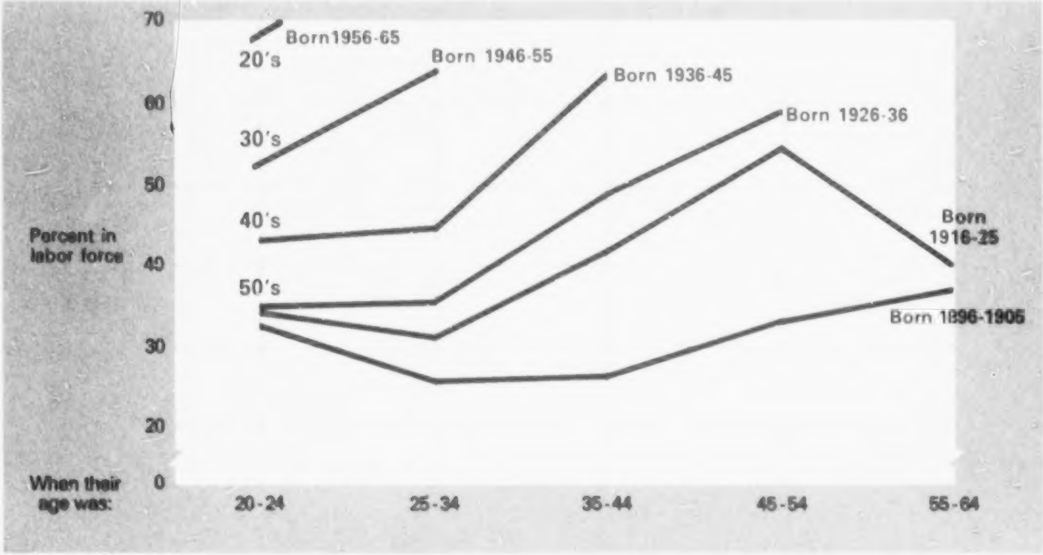
An even higher proportion of women now in their 20s began their adult lives in the work force, and the pattern of the past implies that two-thirds or perhaps even three-quarters of them may be in the work force by middle adulthood. In short, older generations of women (who joined the labor force later in life, if at all) are being replaced by younger generations, most of whom entered the work force early in adulthood and, to date, have remained at work.

Clearly, the rise of working women is a trend with powerful built-in momentum for future years as today's wage-earning women in their 30s and 40s are replaced by the larger numbers of working women now in their 20s and 30s. The momentum will boost the future number and proportion of dual-earner families, foreshadowing proportionally more complex tax returns filed by working couples. The trend has already overtaken the IRS in the form of steadily rising

Today, more women in their 40s and 50s are in the work force.

Figure 5

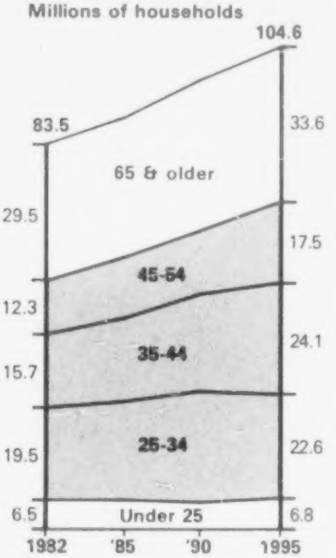
Proportion of women in the labor force by age and generation, 1985



Source ref. 5

Figure 6

Projected number of U.S. households by age of head, 1982 to 1995



Source: ref. 6

numbers of individual taxpayers with total income above $50,000. The number of such returns climbed from 2.2 million (2.4 percent of the total 1040 Series) in 1980 to 6.9 million (or 7.1 percent) by 1984. The IRS projects this income class will encompass 18.6 percent of all individual taxpayers by 1992.

The accelerating growth of this high-income segment will bring an increase in the IRS's work load and processing costs. Taxpayers with income above $50,000, according to the IRS, "possess filing habits and compliance attitudes toward the IRS which directly impact on the examination and returns processing areas." One reason is obvious: virtually all such taxpayers file 1040 returns and 19 out of 20 itemize deductions. The IRS estimates that it costs about 28 percent more to process an itemized Form 1040 than a Form 1040A return, and about 40 percent more than it costs to process a Form 1040EZ return. Another reason is that high-income taxpayers make arithmetic errors more often, presumably because their diverse income sources entail more complex calculations.

Changing Age Makeup of the Population

The changing age-mix in the U.S. population has produced an uneven age profile that affects virtually every segment of society. There are many more people at some ages than at others. The imbalance stems from the large baby-boom generation—nearly one-third of the U.S. population crowded into one 18-year span—and the fact that it is sandwiched between an older and a younger generation, both numerically smaller.

As a result, the population's overall growth rate masks wide variations across age groups. The crowded baby-boom generation will be maturing into later adulthood during the 1980s and 1990s. At the same time, although the total population may increase only marginally, particular age groups will stand out as exceptions. For example, during the next decade the U.S. population will be passing through a period of rapidly increasing numbers of persons in their late 30s and early 40s. (See Figure 6.) In 1982 there were 15.7 million households headed by persons in that age group (19 percent of the total). By 1995, the number is expected to reach 24.1 million households (23 percent of the total). The size of the 45-54 age group also is expanding, with the sharpest forthcoming gains expected after 1990.

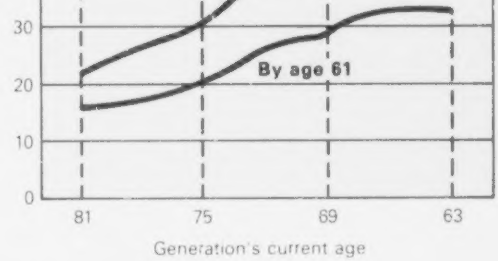
The baby boomers are more than just a large generation—they also are the ones who pioneered the notion of wives and mothers working for pay, and who turned to divorce more readily than their predeces-

The IRS may face a shortage of entry-level programmers and accountants at the same time its work load is expected to be most complex.

sors. When they reach middle-age, an unprecedented fraction of couples filing returns will have two incomes to report, will be at a stage in life when earnings typically peak, and will often claim exemptions for children by former marriages and pay or receive alimony. All these considerations foreshadow a more complex work load for the IRS.

Turning to the older age groups, other demographic changes in store also may affect the IRS's work load. Elderly workers have tended to retire progressively earlier in life, although this trend may be reaching a plateau. (See Figure 7.) Its future course is unclear because several opposing forces are at work and a tangle of legal issues are shaping retirement age. Another trend is more clear cut: the rising proportion of workers who favor a part-time schedule. (See Figure 8, page 8.) These data confirm what common anecdotal evidence suggests: that a mature worker often "retires" out of a full-time job into part-time work. This may be self-employment, independent contracting, and other productive activities that generate potential compliance problems for the IRS because they may be conducive to barter exchanges and "off-the-books" earnings. Further complicating matters for the IRS will be the broadened coverage of IRA, Keogh and other deferred-pension plans from which these future elderly taxpayers will be drawing

Figure 7
Proportion of U.S. men retiring at specific ages, by age group, 1985



Source: ref. 7

taxable income. As noted above, the expanded need to match reports on these varied income sources will increase IRS's returns processing work load.

These upcoming changes in the U.S. population's age-mix have implications for the IRS's own work force as well as for its work load. Nationally, the past two decades have witnessed a sharp expansion of the work force, as labor markets were overwhelmed by record numbers of newly entering workers—the combination of the baby-boom generation reaching work age and the skyrocketing labor force participation rate among the female half of this bulging generation. Labor markets have now digested this bumper crop of workers, changing the outlook for the next 15 years. The middle-aged work force will expand as the baby-boom generation matures. At the same time, the pool of entry-level workers will shrink because of the smaller numbers of people born during the post-1965 baby bust.

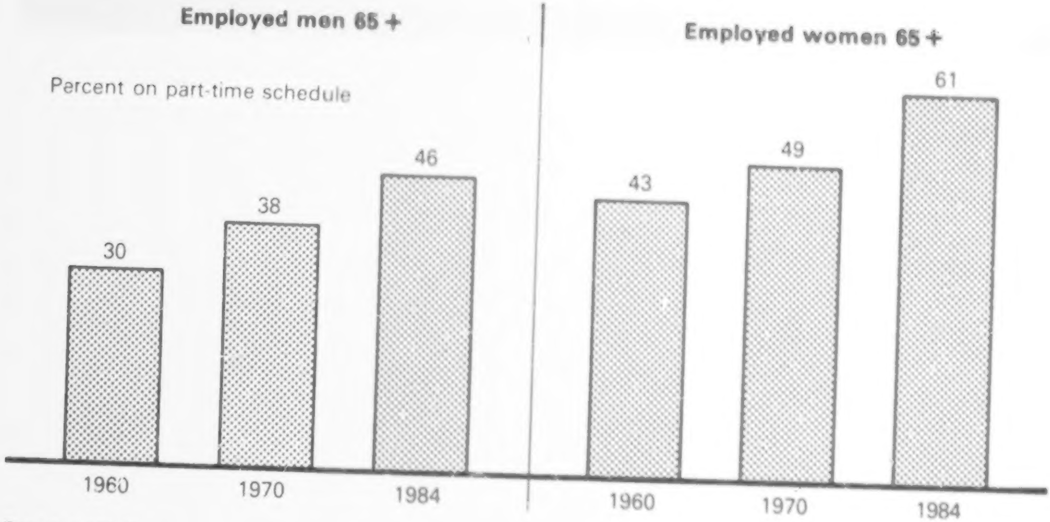
Both these shifts are likely to affect IRS's work force during the next decade. A surplus of middle managers will intensify competition for promotions. The age makeup of IRS's present work force is heavily weighted with employees approaching mid-career ages—more so, in fact, than the national work force as a whole.[2] (See Figure 9.) As these large numbers of IRS employees reach mid-career in coming years, they will be competing for relatively few mid-level openings. This development may reduce the IRS's ability to retain its most experienced—and possibly most essential—workers as it enters the 1990s, when its work load becomes more complex.

A shortage of workers at the entry-level ages is likely to develop in the late 1980s. Young accountants and computer programmers (whom the IRS hires in large numbers each year) will command higher salaries as their numbers shrink—a problem sure to be exacerbated by the rigidity of current federal job classifications and the compression of federal seniority scales. As a hypothetical illustration, the entry-level Revenue Agent (GS-7 Accountant) whom the IRS now recruits with a $17,824 annual salary would command today's equivalent of roughly $20,700 by 1995.[3]

The pool of young accountants or programmers from which the IRS will be hiring is sure to include a substantial proportion of working mothers. To attract them in the tight labor market ahead, the IRS will need to stress the advantages of government employment for workers who must juggle child care and other family obligations with day-to-day responsibilities on the job.

Figure 8

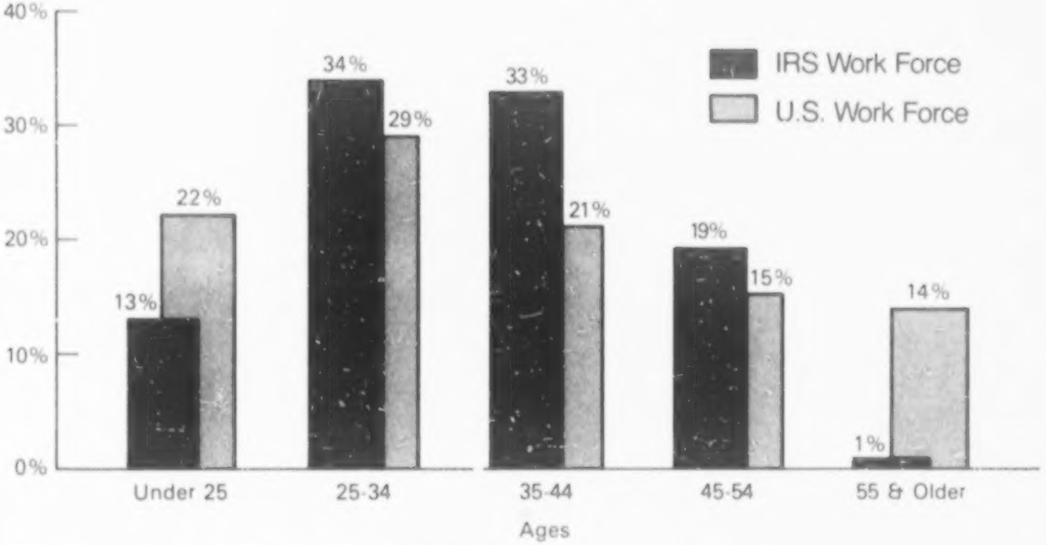
Proportion of U.S. elderly working part-time, 1960 to 1984



Source: ref. 8

Figure 9

Proportion of U.S. and IRS employees, by age group



IRS work force as of 1985, U.S. work force as of 1983

Source: ref. 9

New Geography of Growth

The final set of demographic influences on the IRS is the result of regional and local shifts in where people are choosing to locate. As shown in Figure 10 (see page 10), population growth is projected to vary widely across the nation's regions. The Mountain states, in particular, are expected to register the fastest growth through 2000. These regional shifts will gradually reshuffle the work load that IRS regions and service centers have to handle.

Regional diversity is but one aspect of the changing geography of growth and decline. Another aspect is the stagnation of large metropolitan centers and the growing popularity of smaller, less-crowded communities. During the 1970s, migrants shunned the large metropolitan centers in favor of smaller ones, especially those under a quarter-million population. These were places like Bismarck, North Dakota; Richland, Washington; Nashua, New Hampshire; Fort Collins, Colorado; Fayetteville, Arkansas; Boise City, Idaho; Medford, Oregon; Tyler, Texas; and Modesto, California. The most recent data (for the early 1980s) cloud our interpretation, suggesting a mixed pattern. Only after another few years will it be clear whether the shift to smaller metropolitan centers was a temporary phenomenon or not.

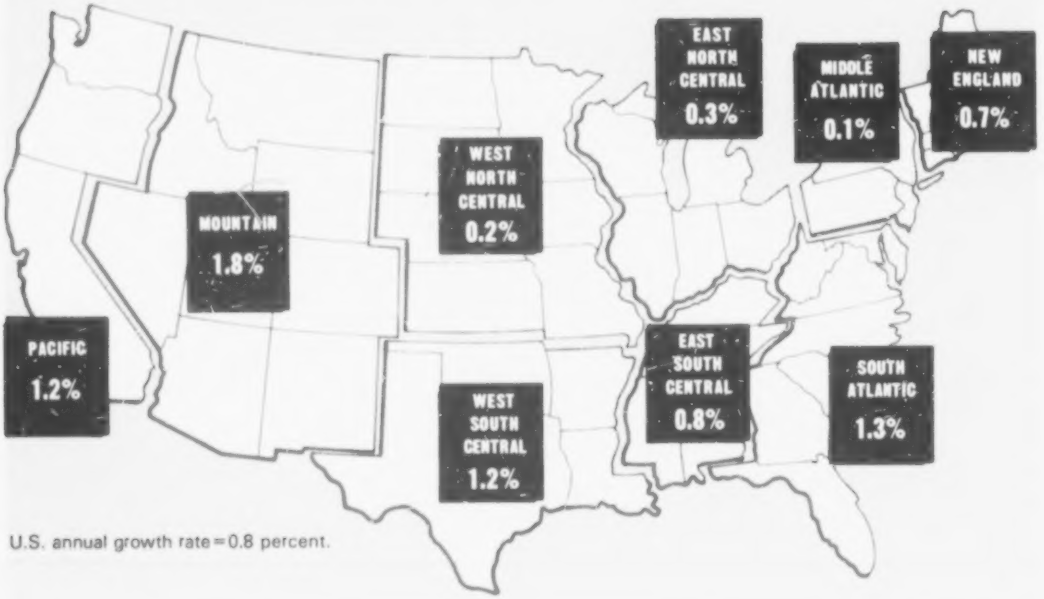
The 1970s shift to smaller communities also was apparent in nonmetropolitan areas. Part of that shift was suburban growth spilling over metropolitan boundaries into areas adjacent to metropolitan centers—the outlying "exurbs," as they have been called. But there was also a move into the more remote nonmetropolitan areas, where growth reappeared in small cities and towns of five, ten and twenty thousand inhabitants.

This shift bears watching because its resumption would further extend the 1970s trend toward a more scattered pattern of settlement—and hence a lower-density "customer" base for the IRS to service.

Policy Implications

The IRS is well aware of the demographic shifts that will complicate its work load during the next 15 years. The Strategic Plan of the IRS represents an effort to formulate a response to many of the trends discussed above.[4] Two current legislative initiatives, however, may also affect the IRS's ability to do its job in the future: the Gramm-Rudman-Hollings budget-balanc-

Figure 10
U.S. regional growth rates, 1984 to 2000
(U.S. Census Bureau regional divisions)



U.S. annual growth rate = 0.8 percent.

Source: ref. 10

ing law and the various tax reform proposals now under consideration.

The budget-balancing law, passed by Congress in late 1985, is designed to rid the nation of its $200 billion deficit by 1991. It requires automatic spending cuts if Congress fails to reduce spending to fixed levels during each of the next six years. The law subjects the IRS to the same reductions (4.3 percent for fiscal 1986) as other federal agencies. Whether or not the IRS will be required to bear its full share of the planned cutbacks is unclear.

Because the IRS collects much of the money that flows into the U.S. Treasury, many members of Congress have worked to block proposed IRS cutbacks. They argue that a reduction in the IRS's budget could be counterproductive, leading to fewer tax dollars collected, thereby increasing the deficit. Administration representatives have maintained that computerization, better management and fewer but targeted audits (auditing mainly high-income taxpayers from whom they are likely to recover the most money) can produce enough savings to warrant cutbacks. In its fiscal 1986 budget request the White House proposed to cut $30 million and 1,254 positions from the IRS work force of 85,000. Noting that these measures could lead to $375 million in uncollected revenues, Congress instead appropriated $11 million over the previous year which allowed for a staff increase of about 1,800.

With the IRS's 1985 performance fresh in their minds, the Administration's fiscal 1987 budget calls for an IRS staff increase. In 1985, computer errors and other problems left millions of forms unprocessed more than six months after the April 15 filing date. The backup on issuing refunds cost the Treasury more than $14 million above previous years in interest payments to refund recipients. The combined impact of cost-reducing cutbacks and demographic changes must be carefully weighed to avoid future tax processing backlogs.

While the budget-balancing law may leave the IRS short-handed, the tax reform proposals under discussion may lessen some of the growing work load. It is too soon to speculate on the exact shape of the final version and passage is by no means guaranteed, but the major proposals under consideration call for an increase in the standard deduction. Such a move would reduce the number of taxpayers who choose to file itemized returns, netting the IRS a savings in processing costs. The President's proposal contains a larger standard deduction than the version the House passed in late 1985. The extent of the savings that any of the plans will generate has not been assessed. Any examination of the work-load relief these plans offer the IRS must take into account the opposing demographic forces—such as, baby boomers reaching high-income categories and dual-earner couples—that will drive up the numbers of potential itemizers in future years.

State level tax collection. Up to this point, this report has focused on the impact of demographic change on national tax collection. Many of the trends affecting the IRS, however, also will make the jobs of state tax administrators more complex in future years. All but a handful of states raise state revenue through individual income taxes. They will be affected to varying degrees by the impact of smaller households, dual-earner couples, the baby boom and baby bust and regional migration. Those Sun Belt states receiving the greatest influx of elderly retirees will see their work load complicated by larger numbers of retirees working part-time and by returns reporting pension and IRA income. The Mountain states, which are experiencing the fastest growth, will see the volume of returns grow faster than other regions. Each state that collects individual income taxes must examine its own demographic situation to prepare for changes in tax processing and administration.

In Conclusion

The broad implications of these demographic shifts for tax collection at both the national and state level can be summarized as follows.

First, national demographic shifts foreshadow an increasing work load for two general reasons. One is that the sheer volume of returns being filed will increase as couples divorce and file separately, and as older persons receive pensions and IRA income, continue to work part-time, and therefore continue to file tax returns well into old age. The other is through the complexity of these returns as couples report dual—but separate—incomes and assets; parents who were formerly married claim exemptions for their children; maturing baby boomers earn higher incomes; and filers increasingly opt to itemize deductions. (The proportion of taxpayers who itemize climbed from 29 percent in 1979 to 41 percent in 1984.)

Secondly, demographic shifts within the IRS work force point toward future imbalances. Specifically, they may bring possible regional mismatches between work load and staff; difficulty recruiting enough entry-level workers with the requisite qualifications—for example, accountants and programmers; congested career ladders at middle levels; and difficulty retaining experienced workers when they will be most needed, given a future work load of growing complexity.

Policy makers must take these trends into account as they work to reform tax law and limit government spending.

Legislation to reform tax law and reduce federal spending could affect the IRS's work load.

Footnotes

1. Fratanduono, Richard, "Trends in the Number of Individual Taxpayers with TPI Greater than $50,000," in IRS, *Trend Analyses and Related Statistics: 1985 Update*, Document 6011 (Rev. 2-85) Internal Revenue Service (Washington, D.C.: Government Printing Office, 1985).
2. Internal Revenue Service, *IRS Environmental Scan: IRS Work Force* (Washington, D.C.: Government Printing Office, 1985).
3. The estimate here is based on a recent Rand Corporation study of comparative wage rates for entry-level and peak-level workers generally, not specifically accountants. It is assumed (for purposes of illustration only) that the market responses to changing age structure will be the same for young accountants as for young workers generally.
4. Internal Revenue Service, *Trend Analyses and Related Statistics: 1985 Update*, Document 6011 (Rev.2-85). *Environmental Scan: IRS Workforce* (Washington D.C.: Government Printing Office, 1985).

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